BRIC IN MACAU

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Bric in Macau

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This book gathers the proceedings of the international academic conference on "The positive role of BRIC during the current financial crisis and thereafter" held in Macau from November 26 to 28, 2009. Organized by Macao Association for the Promotion of Exchange between Asia-Pacific and Latin America (MAPEAL) and co-organized by the University of Saint Joseph (USJ), the conference discussed papers and proposals from 20 academics, former diplomats and international relations' experts from Brazil, Russia, India and China, along with local scholars and researchers. The conference was an original idea of Dr. Gary Ngai, President of the Executive Board of MAPEAL, aiming to understand how Macau can play a positive role as a permanent platform for academic exchanges and debates on BRIC, updating its historical global links and functions. Originally coined in 2001 in a Goldman Sachs forecast investment report suggesting that BRIC could represent 50% of global GDP around 2050, the group became an increasingly important reference in international politics and mass media communication. Witnessing the dynamics of the group, the third BRIC Summit held last April, 2011, in Sanya, Peoples' Republic of China, was able to integrate the Republic of South Africa as a formal member of the forum, creating BRICS. The original expression of the group was translated into Chinese as the Jin Zhuan Si Guo, literally meaning the Four Golden Brick Countries. Jin depicts something precious, promising and provident, describing BRIC as a glittering and hot topic of debate around the world, in which Macau should not be left out.

Gary Ngai & Ivo Carneiro de Sousa (editors)

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BRIC(S) IN MACAU IN SEARCH OF A HISTORICAL AND RESEARCH PLATFORM

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Let us begin by highlighting a contrast: while BRIC(S) have a short and conjectural ten years provisional history or, at least, only a recently increasing international narrative, Macau is the result of a long term history of building up unique structures and global functions. In common, the short history of BRIC(S) and the long history of Macau share the exact same complex dimension: the historical processes and opportunities of globalization. Moreover, Macau is one of the oldest paradigmatic products of the intercontinental globalization of trades, capitals, emigrations and cultural encounters. By contrast, BRIC(S) is a recent product of the acceleration of the diversity of scales and strategies of globalization being less a common political and economic strategy to move as a classificatory trend of global competition and communication (ARMIJO, 2007) emphasizing the financially lucrative opportunities of emergent economies and powers.

In fact, apart from vague ideas on the continental dimension of the respective countries, BRIC(S) have very little in common. From civilizations to political regimes, from economic structures to social systems, it is almost impossible to find anything close to a "common history" of the BRIC(S) countries. Rather, the historical construction of national identities and institutions are distinctly different in these countries, as well as their dominant regional alliances and traditional international political strategies. In a word, is still the nation-state, its national, regional and international projection which is the main structure that decides the key global options of each member of BRIC(S). Contrary to predictions which highlighted the inexorable decline of the nation-state as a *regime* unable to accommodate the challenges of globalization, the truth is that the nation-state, the national, has become one of the most important scales of globalization. Nation-states increasingly incorporate objectives, strategies and even "global" legislation (from terrorism to climate change, from traffics to health, from international criminal law to trade rules) consolidating their role as the dominant *regime* intermediating and organizing territories, populations and economies with the "global". As a consequence, the social sciences called to study the processes of globalization are obliged to understand its multi-scale (local, sub-national, national, global) dynamics and to integrate the nation-state *regime* at the strategic core of any serious research. This means that academic theses and titles will continue to have more "national" nouns and adjectives even when researching global trends and challenges. So it is with BRIC(S) as a strategy for group communication between emergent powerful nation-states trying to claim a new international recognition and promotion of the economic positions they have acquired through the opportunities opened up by the acceleration of the processes of globalization. From this perspective it is not necessary to share a "common" history, politics, ideology or (lack of) or identity, it is enough to display "common" communicational spaces (some summits, conferences and general statements along with rare research and few titles) consolidating their economic global emergency and political international promotion. It is what BRIC(S) do.

The key and most interesting research question is to understand how BRIC(S) became an increasing international reference in the last decade after its singular birth from an investment report made by Goldman Sachs' economist Jim O'Neill in 2001 with the title *Building Better Economics* – BRIC (*Brazil, Russia, India and China*), a paper stressing the group's fast economic growth, its contribution to global GDP and the future need to mobilize these countries for a new sharing of global economic power, including the empowerment of their positions in international institutions, namely in IMF and World Bank (O'NEILL, 2001). At the same time, in recent years, financial groups, leading banks and rating agencies have put forward many new acronyms to highlight the economic investment opportunities in emergent economies (JAIN, 2006). HSBC, for example, proposes CIVETS (Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa) as a new set of profitable investments[1] , regardless of the paramount differences and very fragmentary connections between these countries; Henyep International Wealth Management, in Japan, invites worldwide investments in VISTA (Vietnam, Indonesia, South Africa, Taiwan and Argentina)[2] ; BBVA generously and intelligently prefers EAGLE (Emerging and Growth Leading Economies – China, India, Brazil, Indonesia, South Korea, Russia, Mexico, Egypt, Taiwan, Turkey), a large group of ten emergent economies and very diverse countries that could surpass the G7's GDP in the next decade[3] ; and this year the Goldman Sachs' head of global economic research and most famous acronym maker, Jim O'Neill again, coined MIST (Mexico, Indonesia, South Korea, Turkey) as a new leading group of key emergent economies and profitable markets[4] : it seems a mere question of basic arithmetic for prudent and profitable investments taking into account the multi-scales of the process of globalization and the present day ongoing economic and debt problems in the EU and USA.

These and several other acronyms have, at least, the advantage of warning the academic navigation: the peculiar world of global business and finance opportunities can produce ways of knowing and classify countries faster and in a more timely way than the slow and tangled reflection of social, political and economic sciences installed in universities and academic research institutions. Strictly speaking, there are different ways of knowing and it is no longer self evident that the Enlightenment faith in the rational superiority of the power of Science, with its automatic benefits for the construction of an idea of progress, is always benign. Anyway, despite the philosophical charm of this epistemological crisis, the central problem of this investigation remains open, and albeit the proliferation of

1 http://www.thisismoney.co.uk/money/investing/article-1724350/HSBC-fund-aims-Civets-exotic-stock-markets.html

2 http://www.hywealth.com/en/images/insight/vista.pdf

3 http://www.actibva.com/magazine/estudios-bbva/paises-eagles-paises-que-creceran-por-encima-del-g7-en-los-proximos-10-anos

4 http://www.nytimes.com/2011/01/24/business/24views.html

acronyms and more candidates to enlarge the groups and puzzles of emerging economies, only BRIC(S) have succeeded in international communication as a group that really counts: why? It is almost useless to look for answers among the three dominant schools of thought in international relations (realism, liberal institutionalism and constructivism), as well as in the theorists of a multi-polar world order (HIRO, 2010) or other highly specialized micro-niches of political and social sciences (KERN, 2011: 57-88). There are no clear answers. Again, those fast and opportunistic ways of knowing coming out from the worlds of global business and finance suggest an absolutely simple answer. BRIC(S) development from an investment opportunity ten years ago to a referential group in international relations was not due to simply being the first, but mainly because it includes China, the second world economy and the fast growing economy in the last three decades (GLOSNY, 2010; FLETCHER, 2011). This is an answer so simple that it is probably right.

Let us turn our attention to facts. When the famous Goldman Sachs investment report was published in 2001, the main economic prediction which attracted large attention suggested that BRIC could be responsible for half of the world's GDP by around 2050 (Wan, 2010). The report highlighted at that time that BRIC were already the four largest emerging economies generating 23,3% of total global GDP (PPP) and they could reach 27% in one decade. However, if we follow up the available IMF data, the figures are different, although even more eloquent. In 2001, BRIC accounted for 16,44% of global GDP (PPP), increasing to 24,95% in 2010, a growth of 8,5% in the global GDP thus surpassing the original Goldman Sachs projections.

In the system of communicating vessels created by the globalization of corporate finances and international trade, the growth of BRIC(S) is practically equal to the decline of the G6 (the USA, Japan, Germany, France, UK and Italy) which reduced its weight in the global economy during the last ten years by 9,075% (KERN, 2011: 24). Moreover, the global financial crisis of 2008-2009 (if it is really over) contributed to enhancing the positive role of BRICS and the leading economic performance of China. In fact, China was able to grow 9,2% in 2009, while India also registered an annual growth of 6,8%. By contrast, Brazil witnessed a negative impact of -0,6% in 2008-9, but has since recovered in 2010 to sound growth of 7,5%. The financial crisis was also negative in South Africa, at around -1,8% percent in 2009, but it has since posted growth of 2,8% in 2010. The Russian Federation echoed a very dramatic impact of the financial crisis, with its economy shrinking by -7,8% in 2008-9, but this was immediately followed by a fast recovery reaching 4% growth in 2010 (IMF, 2011).

Despite the quantitative significance of these economic statistics, the impact of the political meetings of BRICS is markedly lower. It took five years after the quoted Goldman Sachs report, for Brazil, Russia, India and China to hold their first BRIC's Chancellor meeting, in September 2006, during the 61st General Assembly of the

United Nations. Two years later, in 2008, the First BRIC Summit was organized in Russia, and the first official general declaration and agenda was decided. In April 2010, a second Summit was held in Brasilia, and a joint declaration of 33 points was published, dealing with the most global themes and challenges: Common Vision and Global Governance, International Economic and Financial Issues, Trade, Development, Agriculture, Fight against Poverty, Energy, Climate Change, Terrorism, Alliance of Civilizations, Haiti, Cooperation, and even including the four countries common interest in jointly publishing their respective national statistics[5] , as well as a "feasibility study for developing a joint BRIC encyclopedia". Finally, in the third Summit held in Sanya, China, on April 13, 2011, the Republic of South Africa joined officially the group to coin the present larger acronym of BRICS (NEVIN, 2011). Following optimistic promotion by the *Xinhua News Agency* (2011), this last BRICS Summit was followed by 800 journalists and 230 different media organizations from China and abroad.[6] The Sanya final declaration presents the group officially as a *Forum* and details in 32 points its political global strategy through a "strong commitment to multilateral diplomacy", an increasing "cooperation in economic, finance and trade matters, which will contribute to the long-term steady, sound and balanced growth of the world economy", a clear support for "the Group of Twenty (G20) in playing a bigger role in global economic governance as the premier forum for international economic cooperation", along with shared general ideas on renewable energy resources, climate change, terrorism, nuclear power or sustainable development (DING, 2011). Moreover, the Sanya Summit was able to agree on an Action Plan, "laying the foundation for BRICS cooperation, with the purpose to strengthen BRICS cooperation and benefit our peoples", enhancing existing cooperation programs, suggesting new areas of cooperation and exploring new proposals through countless sector meetings from culture to sport, from the green economy to science, technology and innovation, including the implementation at UNESCO of a "BRICS-UNESCO Group", aimed at developing common strategies within the mandate of the Organization, as well as the common promise of holding "BRICS Think-tank Symposiums, and consider establishing a network of research centers of all BRICS countries"[7].

It is precisely the central role of China in BRICS, as well as the key impressive development of trade between China and Brazil (the most important new trend between the five countries)[8] , that are factors which could contribute to enhancing the role of Macau as a research and think-thank platform since the territory was able to build up ongoing long term historical relations with the group/forum members. Let us attempt to summarize a brief historical review of these relationships. The survival of a Portuguese (in fact, also European, foreigner and international) presence in Macau over 450 years is due to three key "global" factors. First, the enclave was a long-term business platform capable of mediating Chinese industrial productions (silk, porcelains, furniture, and luxurious goods) to the markets of Southeast Asia, the Indian Ocean, South America and Europe. This was a unique global role in the well known historical context of the Ming closure of Chinese markets to foreign trade. Secondly, until the end of 18th century Macau was the main gateway that allowed the Chinese imperial court and intelligentsia to gather information on the European Scientific revolution, from theories to equipments. As we know, the Catholic missionaries who moved within China in 17th-18th centuries were mainly accepted for their scientific and technical expertise rather than through the novelty of their religious word. Third, Macau has always been a land of exile and exiles tolerated historically by both Chinese rulers and Portuguese colonialism. Exiles of wars, revolutions, social clashes, political oppositions, private agents and merchants, countless adventurers and thousands of refugees from World War II were always able to find shelter in Macau, to recompose their social situation and, in several cases, to build their economic wealth through their intercontinental connections.

The history of Macau added to this peculiar survival system a paradoxical political regime. The enclave has always been an administrative territory claimed by China and controlled by its political cartography, in spite of being a part of the Portuguese colonial empire which provided its government and main administration. A paradoxical situation that, through permanent negotiation, sharing of profits, capitals and trades, albeit some important social incidents, was largely mobilized by China as a global opportunity grounded in those three long term historical factors merging international business, European science and exile.

Nowadays, after the return of the enclave to the People's Republic of China sovereignty in 1999, the Special Administrative Region of Macau, under the intelligent "one country two systems" policy, has seen a decade of very impressive economic growth mainly based on the liberalization and globalization of its gaming industries. Nevertheless, fast economic growth and sound public finances require new ways to diversify and expand the circulation of Macau in the different scales and opportunities afforded by the acceleration of

5 China Statistics Department (2011). BRICS joint statistical publication. Retrieved from: http://www.stats.gov.cn/english/statisticaldata/otherdata/brics2011/P020110412519033616233.pdf

6 http://en.chinagate.cn/archives/boao2011/201104/13/content_22351187.htm

7 Ministério das Relações Exteriores do Brasil (2011). Eventos no âmbito do BRICS de 2006 a 2011. Retrieved from: http://www.itamaraty.gov.br/temas-mais-informacoes/saiba-mais-bric/eventos-bric-2006-a-2010/?searchterm=bric%202006

8 The general statistics for 2010 China's world trade (imports and exports) indicate that Brazil was the 8th trade partner of China, accounting for 2.2%; India the 9th sharing the same percentage; Russia the 11th representing 2%; and South Africa was ranked modestly as the 23 th trade partner of China, representing 0.8% (IMF (DoTS); EUROSTAT, China Trade Document (2010), DG Trade, 8-Jun-11).

the processes of globalization, a challenge that requires an updating of the territory's historical platform roles. Therefore, the PRC central government has emphasized two major platforms able to redefine the long term circulation of Macau's economy and capitals in South China and the world. Firstly, Macau can become a global platform for leisure, entertainment, conventions and services contributing to the economic integration and internationalization of the Pearl River Delta, one of the main primary industrial territories of China, nowadays facing the challenge of shifting from a manufacturing based economy to become a global technological hub. Concomitantly, Macau must further increase its economic role as a platform for Chinese trade and investments in Portuguese speaking countries (Portugal, Brazil, Angola, Mozambique, Guinea-Bissau, Cape Verde, and East Timor) [9], a project in progress since the creation of the Forum for Economic and Trade Cooperation between China and the Portuguese speaking countries (Macau Forum) in 2003, bridging business opportunities through Macau. This second platform is vital for the advantageous economic integration of Macau in the Pearl River Delta which, in turn, can find in the Portuguese-speaking countries the energy resources, primary commodities and market connections the region needs to realize its technological and globally competitive development.

9 The other Portuguese-speaking country, S. Tome and Principe, an Atlantic archipelago near the Guinea Gulf, is not represented in the Macau Forum, since she stills recognizes Taiwan and has not official diplomatic links with the PRC.

In this set of historical and contemporary global functions, Macau can also update its long term diverse historical links with BRICS' countries. BRAZIL was a key historical, commercial and cultural linkage of Macau. In trade terms, Brazil first became an important trading partner of Macau in the 18th century, enhancing its historical role of intermediation with Chinese markets and capitals. The 18th-19th centuries saw huge increases of tobacco exports from Bahia, for example, and found in Macau a global trade intermediary able to spread tobacco powder in Chinese markets, making the fortunes of several local and South Chinese traders and their new capitalist companies (LAPA, 2000: 253-299). The development of trade relations was followed by a cultural and intellectual interest on the history of Macau and Chinese civilization, with a Brazilian born in Minas Gerais, José Aquino de Guimarães e Freitas publishing the first history of Macau in 1828. Entitled *Memória sobre Macau*, and edited by the prestigious Coimbra University Press, the book merges an interesting summary of Macau's history with a new proposal for connecting the Portuguese colonial enclaves in Asia to South America through a modern capitalist company (SOUSA, 2007: 619-645). At the same time, Macau was able to inform the Brazilian elites on leading aspects of Chinese culture, installing in the urban aristocracies and upper classes a *Chinoiserie* fashion merging the import of Chinese artifacts with the imitation of Chinese porcelains, furniture, gardens and art (LEITE, 1992).

Countless refugees came from RUSSIA to Macau during World War II and found shelter and support. Among them, we find one of the most important painters of Macau, George Smirnoff (1903-1947). Beginning in 1944 and continuing into 1945, Smirnoff created a unique collection of 85 watercolor scenes of Macau. More Portuguese than Chinese, more colonial than popular, the collection organizes a unique portrait of the territory's historical heritage, social life and landscape (SCENES, 2001).

INDIA was a key historical reference for Macau's paradoxical political regime. The enclave was formally part of the old Portuguese "State of India", a colonial system dating back to 1504, which was ruled by a Vice-Roy gathering a maritime network of cities, fortresses and trade factories from Eastern Africa to Timor. Trade, soldiers, slaves, and different products flowed between the Portuguese colonial enclaves in India and Macau, organizing a long term commercial platform between Chinese producers and the Indian Ocean markets (BOXER, 1991: 39-64).

CHINA is not only where Macau is located and belongs to, but historically was its very reason for *being*, for being a special subject and region. It was precisely because of its Chinese spatiality that the territory became a commercial platform, a tolerated land of exile and a key gate for cultural and scientific encounters between East and West, building up a long term special multi-continental platform for China's global connections, including the worldwide spread of thousands of Chinese workers.

In fact, Macau sent some thousands of poor Chinese peasants from the Southern provinces to SOUTH AFRICA through the dramatic coolies traffic amounting from 250.000 to 500.000 people during the period 1847 to 1875 – a huge number and almost ignored historical global process. Although exported mainly to Cuba and Peru, Macau kept sending Chinese coolies to the South African mines even after the formal Chinese abolition of this indentured and ignominious emigration in 1874 (YEN, 1985: 119-122). In fact, after the end of the Boer War, in 1902, mine owners and the new British administration in the Transvaal were desperately looking for a cheap labor force, and Macau was a "neutral" place able to avoid the Chinese prohibition on such emigration. Again, thousands of Chinese workers, mainly peasants from Guangdong, where sent through Macau and its connections to Mozambique to the Rand mines in South Africa.

Macau still holds this memory of multi-continental encounters, global business opportunities and a transcultural historical legacy.

Macau can and should reinvent these historical links to play an original role in the research on the international emergence of BRICS. Framed by the principle of "one country two systems" and grounded on a Basic Law guarantying freedom of expression, communication, research and the exposition of new ideas, the economic and financial soundness of the Special Administrative Region of Macau can offer a unique place for large international conferences and solid academic inquiry on BRICS, the new emergent economies and the

process of a multi-polar order and globalization. If now is the time for diversifying the Macau economy, the historical long term linkages of the territory to the BRICS' countries are a cultural advantage to open in the Special Administrative Region a unique global research center on BRICS. It seems one of those opportune platform roles that were always able to (re)shape the singularity of Macau.

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BRAZIL AND ITS BRIC PARTNERS: CHALLENGES AND PROSPECTS

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THE BRIC COUNTRIES

The acronym "BRIC" refers to the emerging economies of Brazil, Russia, India, and China. It was first used in 2001 by Jim O'Neal, of Golman Sachs, who proposed that by the year 2050 these four countries' combined economies would surpass the richest economies of the world.[1] The BRICs as a group account for more than 25 percent of the world's land area, more than 40 percent of the world's population, and their combined GDP (PPP) account for more than 15 trillion dollars. In addition, the economies of some of them have grown faster than those of developed countries. A paper by WILSON & PURUSHOTHAMAN (2003), O'Neal's associates at Goldman Sachs, shows that over the "next 50 years, Brazil, Russia, India and China – the BRICs economies—could become a much larger force in the world economy". The authors mapped out GDP growth, income per capita and currency movements in the four economies until 2050, and concluded that, "if things go right, in less than 40 years, the BRICs economies together could be larger than the G6 [the G7 minus Canada] in US dollar terms". The authors suggest further that in about four decades the "largest economies in the world (by GDP) may no longer be the richest (by income per capita)…".

Several follow up studies on the BRICs have been published in recent years, by Goldman Sachs economists as well as by other authors.[2] Some of the studies reflect optimism with respect to the future role attributed to the BRIC countries by Jim O'Neill and his associates at the Golden Sachs Financial Workbench (http://www.gs.com); others have expressed reservations with respect to the group as whole, or with respect to Brazil's future economic performance and whether it should or should not remain a BRIC member; and more recently some observers have raised similar doubts with respect to Russia's economic future and its membership in the group as well (COOPER, 2006a, 2006b).

With this paper we intend to review some of the main characteristics of the BRIC countries, describe and examine, on a comparative basis, their role at the regional and international levels, and identify challenges and prospects facing them individually and as a group. The paper is organized as follows: first we will examine briefly the political history of each of the four countries; then concise description of selected indicators of their socioeconomic conditions will be presented; the process we are calling diplomacy at the highest level will follow, that is, the efforts of mutual approximation made by heads of state and government of the four countries during the last decades, especially since the end of the Cold War; the last

1 O'NEILL, , Jim. "Building Better Global Economic BRICs," Goldman Sachs Global Economics Paper No. 66, November 30, 2001

2 See, for example, O'NEILL et al. (2005), COOPER (2006a, 2006b), O'NEILL (2007), RENARD (2009).

two parts of the paper are dedicated to each country´s challenges and prospects, and some concluding remarks.

A BRIEF POLITICAL HISTORY

A comparison of the four BRIC countries shows that they exhibit some similarities but also many differences. A brief historical description of each of the four countries will contribute to a better understanding of their similarities, differences and contrasting profiles.

Brazil. It is generally agreed upon that the first Europeans to arrive in Brazil were the Portuguese Admiral Pedro Alvarez Cabral and his royal fleet. They were on their way to India but were carried away from the African coast by currents and winds and arrived at present-day Bahia on 22 April 1500. The new territories were largely neglected until the brazil wood tree, whose trunk produces a red dye and which gave its name to the country, was discovered and exported to Europe until it was practically wiped out; then the production of sugar (from sugar cane) with African slaves became the main source of the economy. The interior of the colony was settled by pioneers in search of gold and precious stones. Attracted by its natural wealth the French established a colony in what is today the city of Rio de Janeiro. Expelled in 1567 they established another colony ((1612-1614) in present-day Sao Luis, capital of the state of Maranhão, but again were expelled. The Dutch settled in the Northeast—today Recife and Olinda, but withdrew in 1661 after years of fight.3

In 1808, fleeing from Napoleon´s invasion, the Portuguese courts moved to Rio de Janeiro. In 1815 king João VI created the United Kingdom of Portugal, Brazil and Algarve; when he returned to Portugal (1821) his son Pedro stayed in Brazil as a regent. The following year he proclaimed Brazil´s independence from Portugal and was crowned Pedro I of Brazil. In 1831 he returned to Portugal and left his five year-old son as heir to the throne. Crowned in 1840 as Pedro II his reign lasted until 1889, when a military ***coup*** instituted the republic.

For the next four decades Brazil remained relatively stable politically, until 1930 when a revolutionary movement installed Getulio Vargas as acting president. In 1934 Vargas was elected by the Congress for a four year term, but in 1937 he imposed a new constitution and remained as a dictator until 1945, when Eurico Gaspar Dutra was elected. In 1950 Vargas returned as president elected by popular vote, and in 1954 amidst a political crisis and pressure to resign he committed suicide. Juscelino Kubitcheck, elected president in 1956, started an ambitious program of industrialization and development and moved the Capital from Rio de Janeiro to Brasília. Janio Quadros, a former governor of the state of Sao Paulo, was elected in 1960 with the promise of fighting corruption, controlling inflation, and promoting development, but he resigned seven months after taking office. The military brass opposed to vice-president, Joao Goulart, being sworn in as president. A parliamentary system was adopted, with executive powers vested in a prime minister and his cabinet. Later on, as the outcome of a national plebiscite, the presidential system was restored with Goulart as president (head of state and government). However, as a reaction to Goulart´s political and economic initiatives—considered leftist--, high inflation and instability, in March 1964 the military took over the government and ruled the country for almost 22 years.

Civilian administration was restored in 1985 with the election by the Congress of Tancredo Neves, governor of Minas Gerais, as president. But he died before inauguration, and José Sarney, the vice-president was sworn in as president. As part of the transition process, the Congress enacted a new constitution, while the country went through a period of economic instability, hyperinflation, and default of foreign debt. Fernando Collor de Mello, elected president in December 1989 by popular vote, imposed a drastic anti-inflation program that resulted in one of Brazil´s worst recessions. In September 1992 Collor was impeached by the Chamber of Deputies and resigned the following December before the Senate voted on his impeachment. Vice-president Itamar Franco was sworn in as his successor. During the first semester of 1994, the government instituted a stabilization plan (***Real Plan***) which involved a new fiscal strategy, monetary reform and a new currency—the ***real***, and opening the economy. The plan was successful.

Fernando Henrique Cardoso, a well known scholar, former senator, minister of foreign affairs and finance minister during Franco´s government, was elected president in October 1994 and re-elected four years later. He intensified privatization of state controlled companies, opened further the economy, promoted foreign investments, maintained economic and political stability, and created important social programs. On 1 January 2003 Luis Inacio Lula da Silva, a former metallurgic worker and labor union leader, became the new President of Brazil; in 2006 he was re-elected until 31 December 2010. He expanded social programs and followed with the main economic policies of the previous government. Although belonging to opposite parties both presidents have contributed to Brazilian political and economic stability and have elevated the country to a higher international status.

Russia. In the early part of 9th century (A.D.) Rurik, leader of a Scandinavian tribe, occupied the city of Novgorod. Oleg, his successor, conquered Kiev and established the Kievan Rus´ kingdom. Oleg´s grandson, Vladimir I, expanded the kingdom, became an allied of Constantinople and established Greek Orthodoxy as a state religion. During Yarolav the Wise reign, Vladimir´s successor, Kievan

3 This brief political history of Brazil is based mainly on the following sources: CODATO (2005), SCHNEIDER (1991), FAUSTO (1999).

Rus´ reached its apogee, but after his death it declined and was destroyed by Mongols (Tartar) in 1237. [4]

Around the end of the 14th century Moscow had become an important center; Ivan III, its Grand Duke, expelled the Tartars in 1480. Ivan IV the Terrible expanded and unified Russia. After a series of troubled times in 1613 the boyars (nobles) elected Michael Romanov as tsar. The Romanov dynasty would rule Russia for more than 300 years. One of its most important emperors (from 1682 to 1725) was Peter the Great. He promoted profound reforms in all realms of Russian society and culture, and transferred the capital from Moscow to St Petersburg. After his death Russia had short time rulers until Catherine the Great, Empress from 1762 to 1796. She expanded Russian borders, became a powerful sovereign, continued Peter the Great´s reforms, and promoted the westernization of Russia.

In June 1812 Napoleon invaded Russia leading the largest army ever seen. In the middle of September he entered an empty and burned down Moscow. Without food and supply he retreated, but as the winter approached, with temperatures below freezing, and under attacks, Napoleon´s powerful army was reduced to a few thousand hungry and dying men. The Russian campaign became the main cause of his downfall, and Russia emerged more powerful.

4 For references on brief histories on Russia/URSS see: LAMBERT (www.localhistory.org/russia/htmil (20 Dec 2009); FRITZPATRICK (2004).

However, the autocratic tsarist regime was increasingly criticized. In the Far East an ascending Japan attacked Russia in January 1905 and imposed its forces a series of defeats. Tsar Nicholas was forced to promote reforms, including a constitution and a parliament (Duma). But popular discontent increased. With the First World War the country suffered defeats, food shortage and economic collapse. Without support, in March 1917 Nicholas abdicated the throne. He and his family were executed by the Bolsheviks in 1918.

Russia was devastated by a civil war until 1920 when the Bolsheviks claimed victory. To recover the country from destruction Lenin launched a New Economic Plan (NEP), but with his death in 1924 there was a struggle for power and Stalin emerged as the victor. He gradually purged all opposition and became a personal dictator. With the outbreak of the Second World War the Soviet Union was invaded by the German Army; the Germans were defeated and the Soviet Union emerged as a super power, along with the USA. The struggle for world power led to the Cold War and increasing proportions of the URSS´s budgets were diverted to military build up. With Stalin´s death (1953) Nikita Khruschev dismantled many of the repressive policies then existing, but in 1964 he was ousted. During the next two decades the country went through a period of stagnation. In March 1985 Mikhail Gorbachev became general secretary of the CPSU and with perestroika and glasnost set in motion profound reforms, withdrew Russia troops from Afghanistan, and the people were allowed to elect the members of the Duma. Rapidly political changes reached Eastern Europe culminating with the fall of the Berlin wall on 9 November 1989.

In June 1991 Yeltsin was elected President of Russia; at the end of that year Gorbachev resigned and the Soviet Union was replaced by the Community of Independent States (CIS). Yeltsin resigned on 31 December 1999. His tenure has been characterized by corruption, unemployment, economic collapse, conflicts with Chechnya, and the transformation of Russia into a capitalist state. Upon his resignation Vladimir Putin, then PM, became acting president until March 2000 when he was elected President, and re-elected in 2004. He is credited to improvements in living standards, political stability and increases in GDP, but criticized for poor record on human rights, for being an autocrat, and for attempting to reassert Russian leadership in the former Soviet republics and in Eastern Europe.

In May 2008 Dmitri Medvedev became President of Russian, and appointed Vladimir Putin as PM. At the beginning of August 2008 the conflict in Georgia intensified and Russian bombers attacked several military and non-military targets in that country. Soon afterwards Russia was hit by the global financial crisis. Before the crisis, the government seemed confident that the Russian economy was strong and the ruble might become a reserve currency of Eurasia. However, Russia´s foreign exchange reserves have diminished considerably and the ruble lost most of its value.

India. India has an ancient and complex civilization dating back to about 5,000 years when inhabitants of the Indus River Valley developed an urban society based on commerce and agriculture. However, the Indus Civilization started to decline around 1,500 before Christ; about that time Arian tribes originally from the Caspian Sea area began settling along the Ganges River Valley.[5]

Greek historians registered Alexander´s the Great campaign in India (327-325 before Christ) and gave their impression of local conditions as well as of Greek influence upon Indian culture and history. Along the next centuries there was a fusion of the two cultures, notably in the arts, architecture, and politics. Ancient and Medieval India was formed by hundreds of kingdoms with poorly defined borders. The north of the country was unified during the 4th and 5th centuries A.D. under the Gupta Dynasty, period known as a “golden era”, when the Hindu culture reached a significantly high level. Education, the arts, and Sanskrit literature flourished. Religion developed creating the foundation for modern Hinduism. Remarkable advancements in mathematics, medicine, and astronomy were also observed, as well as the Indian numerical system mistakenly attributed to the Arabs who took it to Europe. The decimal system is also an Indian achievement during this period.

5 In a concise way ROBERTS (2001) describes various periods and aspects of India´s and China´s civilizations. Another important reference is the classical work by DURANT (1954), especially Vol. I, Our Oriental Heritage). See also SMITH (1967).

As the Gupta Dynasty declined, Northern India once again became fragmented with various kingdoms. But during centuries (7th-13th A.D.) internal and external commerce developed, particularly with the Arabs and Southeast Asia, which adopted Indian arts, architecture, Sanskrit language and literature and social costumes. During part of this period (10th-11th centuries) Turks and Afghans established Sultanates in Delhi, and thus created conditions for the penetration and expansion of Islamism in the country. At the beginning of the 16th century descendents of Genghis Khan occupied the Northeast of India and established the Mogul (Mongolian) Dynasty which lasted for over 200 years and left a rich heritage. In the meantime, the South of India was dominated by Hindu kingdoms where both Islamism and Hinduism lived peacefully side by side.

The British East India Company, founded in 1600, gained a foothold in India around 1612, through intensive trade with major cities (Madras, Bombay, Calcutta), under Maharajas protection. The British expanded their influence and by 1850 controlled most of India. In 1857 the British Parliament transferred to the Crown the British East India Company; the following year marked the official beginning of British rule (British Raj), which ended with India´s Independence in 1947.

India´s struggle for independence was characterized by non-violence and idealism inspired by Mahatma Gandhi, who exerted considerable influence over Jawarhalal Nehru, PM from 1947 to 1964. Nehru inspired the Non-Aligned Movement and performed an important role at both regional and international levels. However, India and Pakistan fought three wars (1948, 1965 and 1971) and both countries have large military arsenals and nuclear weapons, a situation that causes concern over security in the region. India and China also have unresolved territorial disputes that led to a brief frontier war (1962), won by China. With the disintegration of the Soviet Union, a close allied and supporter for over twenty years, India suffered another setback. But at the beginning of the 1990´s the Indian government started a series of structural changes at the domestic level and began opening up its economy as part of an effort to promote closer integration into the world economic system. From political and diplomatic points of view, India approached Europe and the US and signed with latter various agreements, including a nuclear cooperation treaty concluded in 2008.

China. Historical records indicate that a Chinese nation, with a dominant language and shared values, already existed more than 3,000 years before Christ. The knowledge about the Chinese civilization and its characteristics was made possible by records maintained by the various dynasties that ruled China until the beginning of the twenty century, and the records are not about China alone but also about its neighbors. Most records, written by members of the intellectual elite, had the purpose of providing information to new governments about their preceding leaders and their administration in order to guide and justify their own policies. For this reason, the records concentrated mainly on the political dynamics of society.

After centuries of progress and achievements, practically isolated from the outside world, China was unable to resist the European imperialism and by the middle of the 19th century was forced to open up to foreign trade. The opium produced by British India was imposed onto China, provoking the Opium Wars with Britain (1839-1842 and 1856-1860). A series of humiliating defeats, unequal treaties and heavy indemnities imposed upon China resulted in the penetration of the Chinese territories by foreigners, weakening the economy and the Emperor´s control of the nation. Popular rebellions along the second half of the 19th century, the defeat in the Sino-Japanese War (1894-1895), and a growing popular discontent led to the proclamation of the Republic of China in 1912 and thus ending more than two thousand years of dynastic rule.

The Republic of China (1912-1949), proclaimed by the Kuomintang (Nationalist Party), under the leadership of Dr. Sun Yat-sen, was later characterized by instability and fragmentation, with warlords in various regions of the country, until the late 1920´s when Chiang Kai-Shek of the Kuomintang was able to reunify China under his control. To fight a second war against Japan (1937-1945) the Nationalists and the Communists forged an alliance; however with Japan´s defeat (1945) the alliance was broken, followed by a civil war. With its victory over the Nationalists, the Communist Party of China (CPC), led by Mao Zedong, established the People´s Republic of China (PRC) on 1 October 1949. Under Mao and his associates the PRC underwent unsuccessful movements (Great Leap Forward in the 1950´s; the Cultural Revolution in the 1960´s) that left the economy and the country as a whole in shambles. Starting in 1978, under the leadership of Deng Xiaoping, China began economic and market reforms which led to rapid economic development that continues up today. However, despite some relaxation, the government maintains tight economic, social and political control under the leadership of the CPC.

SELECTED INDICATORS OF SOCIO-ECONOMIC CONDITIONS

A series of tables have been prepared based on data published by the UNDP Human Development Report (HDR) 2009.6 Table 1 (Annex) shows the 2007 Human Development Index (HDI) and its Components, for the BRIC countries. Among the 182 countries

6 Recent reports by the IMF, World Bank, and the Asian Development Bank were also consulted. Although they present more recent data (2008 and 2009), they focus mainly on geographical regions, rather than on individual countries. The UNDP Human Development Report is based mainly on 2007 data and it is assumed that changes that might have occurred in the meantime are not significant since we are dealing here mostly with variables whose indicators do not necessarily change on a yearly basis.

included in the report, Russia and Brazil, occupy the 71st and 75th ranks, respectively; they are part of the sub-group of 43 countries classified with high HDI (ranks 39th to 83rd). China and India were ranked in the 92nd and 134th positions, respectively, as part of a sub-group of 64 countries (ranks 84th to 158th). A sub-group of 38 countries is classified with very high HDI (ranks 1st to 38th), and a fourth sub-group of 21 countries is considered as having low HDI (ranks 159th to 182nd). As has been revealed since UNDP completed its first HDR in 1980, the HDI is composed of three dimensions: a long and healthy life, knowledge, and a decent standard of living. Life expectancy at birth is the indicator for the first dimension index, or life expectancy index; adult literacy rate and gross enrolment ratio in school are indicators for the second dimension index, or education index; and GDP per capita (PPP US$) is the indicator for the third dimension, or GDP index.7

One can observe in Table 2 (Annex), which shows HDI Trends for the period 1980-2007, that the average annual growth rates, in percentage terms, for China was 1.37, and 1;31 for India. Both values were higher than that for Brazil (0.63), indicating that during the period considered both China and India showed more advancement than Brazil in terms of human development. Data for Russia were available only for five of the eight years considered, but it showed a slightly higher HDI for the year 1990 (0.821) than for the other years included in the table. As one can observe, contrary to the other three countries the Russian HDI trend was negative for the period.

Demographic trends for the four countries are reported in Table 3 (Annex). It shows that Russia had a relatively high population decrease from 1990 to 2007; a significant decrease is expected to continue in the course of the next decade, when that country will have 6.5 million people less than its total population in 2007. The rates of population increases for the period 2004-2015, in percentage terms, for the four countries were estimated at -0.5 for Russia, 1.2 for Brazil, 0.6 for China, 1.3 for India, showing a decreasing tendency for the four countries (UNDP, 2006). China will maintain the largest population of all countries in the world, followed by India, whose tendency will be to overcome China´s population by the middle of the 21st century.

More than half of the Indian population is of young people, 25 years old or less, potentially productive; some analysts anticipate that India´s productive population will continue to increase during the next three decades. Although this may be considered an asset, one has to take into account also the fact that the Indian economy will have to absorb such a mass of young people when they are ready to enter the job market. Data for the period studied show that Brazil will have the largest proportion of urban population in 2010 (86.5%), followed by Russia (72.8%), while China and India will maintain relatively large rural populations, that is, 55.1% and 69.91%, respectively. By the end of 2010 India will have the largest ratio of child dependency (almost 48%), but the lowest rate of old age dependency, and Russia will have the highest one (almost 18%). Brazil will have the second highest rate of child dependency, followed by China, which is expected to have the second highest rate of old age dependency, followed by Brazil.

Basic data for economy and inequality for the BRIC countries are reported in Table 4 (Annex). China had the highest GDP for the period considered, both in terms of US dollars and in terms of PPP. Brazil registered the second largest GDP in terms of US dollars, but in terms of PPP it comes in the fourth place. Russia had the third GDP both in terms US dollars and in terms of PPP. India had the fourth GDP in US dollar terms but the second highest GDP in PPP terms. China´s and India´s annual growth rate for the period of 1990-2007 were almost 9 percent and 4.5 percent, respectively, while Russia´s and Brazil´s were only 1.2% each. The highest value of per capita income for all four countries, in PPP terms, for the period considered, was reported as the year of 2007 when Russia presented the highest per capita income, followed by Brazil, China, and India.

The Consumer Price Index (CPI) is a measure of the average change over time of the price paid by urban consumers for a basket of consumer goods and services. It is widely used as an indicator of inflation and as a guide to public policy formulation. It may also be used as an indicator of consumers´ purchasing power: as prices increase, the consumer´s currency value decreases (US/BLS, 2010). As shown in Table 4 (Annex), the average annual change in CPI for the period in question was the highest one for Brazil, a reflection of the high rates of inflation observed in the country during decades, until the middle of 1994, when the ***Real Plan*** was established and inflation has been under control since then. Russia had the second highest annual change in CPI for the period, also a reflection of several years of high inflation during the period following the end of the Soviet Union, when Russia faced serious economic instability and repeated crises. On the other hand, China and India had much lower CPI value, showing that their rate of inflation was relatively lower and their economy relatively more stable than the other two countries.

The Gini coefficient is also a widely used indicator of national income equality/inequality; the index values vary from 0 to 1, where 0 would indicate a perfect equality—everyone in the economy would have the same income, and 1 would indicate perfect inequality. Table 4 shows that income in the Brazilian and the Chinese societies is relatively more concentrated than in the Russian and Indian societies. The other indicators of income distribution tend to support these results.

The HDR (2009) shows a Human Poverty Index (HPI-1) calculated for 135 countries that are not OECD members. As show in Table

7 Full details of the method of calculation of these dimensions, indicators, and indices can be found at: http://www.hdr.undp.org/en/statistics/tn1.

5 (Annex), Russia obtained the lowest index (32) among the four countries, followed by China (36), Brazil (43) and India (88)—the highest ranks are indicative of worse conditions of human poverty. Therefore, Russia obtained the best results among the BRIC countries, followed by China, Brazil and India. The major indicators of the HPI-1 are adult illiteracy rate aged 15 or more, percentage of the population not using an improved water system, and percentage of the population below the income poverty line.

When an income of $1.25 a day was considered, the following results were obtained: 5% of the total population for Brazil, almost 16% for China, and more than 41% for India. For an income of $2.00 a day the results were the following: 12.7% for Brazil, 36.3% for China, and 75.6% for India. This means that on the basis of the latter criterion more than one third of the Chinese population, or about 443 million people, lived below the poverty line during the period of the study. In the case of India, two thirds of the population, or about 776 million people were below the poverty line. In the case of Brazil about 14 million people lived below the poverty level, while in the case of Russia, with less than 2% living with $2.00 a day, about three million people lived below the poverty line.[8]

8 However, as will be shown afterwards, as a consequence of the world financial crisis, a larger proportion of the Russian population is facing a rapid process of impoverishment

Table 6 (Annex) shows public expenditure for health and education for the four countries. Russia and China allocated larger sums of their budget for health (10.8% and 9.9%, respectively), followed by Brazil (7.2%) and India, which spent 3.4% with health. In terms of per capita expenditure, Russia remained the first of the four countries, with US$404, followed by Brazil, with US$367. China allocated US$144 per capita, and India only US$21. Brazil dedicated 14.5% of total government expenditure do education, followed by Russia, with 12.9% and India, with 10.7%. No data were available for China, although it is widely known that as part of its process of transformation China is giving special attention to the development of its educational system, particularly in areas such as science and technology, engineering, biological sciences, and others. There was relatively little difference among the four countries with respect to a healthy life expectancy at birth, in terms of years, that is: 68 for China, 66 for Brazil, 65 for Russia and 57 for India.

DIPLOMACY AT THE HIGHEST LEVEL

After the end of the Cold War and the intensification of the process of globalization of the economy and the financial system, new types of regionalism—economic, political, strategic—emerged and have contributed to strengthen the role of some international actors, such as Brazil, Russia, China, and India. These four countries are considered today important regional economic powerhouses and their role at the international system and their contribution in economic, political and security issues are expected to be even more important in the next decades.

In the last several years Brazil on one hand and Russia, India and China on the other, have frequently demonstrated mutual interest in intensifying their relations and promoting closer cooperation in areas such as economic, trade and investment, political and strategic, science and technology, and others. Evidence of such an interest are the several visits and summits at the highest levels, by heads of states and governments, various meetings at ministerial level, by members of their respective legislative bodies, academics, intellectuals, artists, as well as a large number of treaties and agreements of cooperation that have been signed, and projects that are agreed upon or are already being developed. The highlights of official visits by heads of states and government are presented below, as well as a brief reference to the first BRIC summit that took place in Russia.

Brazil-Russia. Although its main interests were in Europe and Asia, Czarist Russia showed great expectations with respect to relations with Brazil, and supported scientific and exploratory missions to the country, the most famous of which was headed by the German naturalist and ethnographer Georg Heinrich von Langsdorff, who later became the Russian Consul General in Brazil (1813-1829), with residence in Rio de Janeiro. Bilateral trade developed for a while, but both Russian and Brazilian international trade were carried out through London or Lisbon, and depended on the British navy for protection. Besides the long distance between them, both countries relied mostly on their respective domestic markets. Diplomatic relations were interrupted in 1917, and re-established in 1961,[9] but the formal re-approximation did not produce concrete results until the 1980´s, when important political and economic changes occurred in both countries: in Brazil, the election and inauguration (15 March 1985) of a civilian government after more than 20 years of military regime, and almost one month later (11 April 1985) Mikhail Gorbachev was elected Secretary General of the CPSU (GUIMARAES, 2000).[10]

The intensification of contacts culminated with the official visit to the Soviet Union by President José Sarney, from 18 to 23 October 1988, as the first Brazilian President to visit the country; he was accompanied by over 300 persons, including ministers, members of the Parliament, political leaders, and businessmen. The visit was an important event for bilateral relations, and resulted in the signature of several agreements, protocols, and a “Declaration of Principles of Interaction in Favor of International Peace and Cooperation”, a

9 In April 1945 Brazil and the Soviet Union established diplomatic relations, but in October 1947 the Brazilian government broke relations with that country.

10 Tancredo Neves, former governor of the state of Minas Gerais, was elected the new civilian President, but he became ill and died. José Sarvey, Neves´ Vice-President, was sworn in and governed the country until the election of President Fernando Collor de Mello (1990).

document until then signed only with a few other countries, including India, and which elevated bilateral relations to the highest level. In January 2002 President Cardoso visited Russia and at the dinner offered by President Putin he declared that Brazil and Russia share several affinities that contribute to make the two countries closer, such as the multi-ethnic composition of their population, and their continental space; another common characteristic, he emphasized, is that the two governments are committed to promote sustained development.

On his way back from the APEC meeting in Santiago, Chile, President Putin visited Brazil as an official guest in November, 2004. Several agreements of cooperation were concluded on the occasion: an understanding between the Vneshtorgbank and the Brazilian National Bank for Social and Economic Development, a convention between the governments to avoid double taxation and the prevention of fiscal evasion, cooperation in such areas as petroleum, sports, space, telecommunication, science and technology, and others.

In October 2005 President Lula visited Russia, with a large group of ministers, governors, members of the Congress, and business executives. In his address at the Kremlin the Brazilian President pointed out similarities between Brazil and Russia and the challenges that both countries face in order to become competitive in a globalized world and at the same time meet increasing demands of their respective societies. He also emphasized the favorable and promising moment in bilateral relations, especially with respect to trade and cooperation in science and technology as well as in space research, given the participation of the first Brazilian astronaut in the following Russian space mission. The Brazilian President demonstrated appreciation for the contribution given by the Bolshoi Ballet in Joinville, a city in the state of Santa Catarina, where the Russian ballet maintains a school for Brazilian children; he also mentioned the possibility of opening up a school of music in Fortaleza, capital of the state of Ceara, with support of the Tchaikovsky Conservatory in Moscow.

President Dimitri Medvedev visited Brazil on November 25-26, 2008. The program included conversations of the two presidents, visit to Petrobras, the Brazilian oil company, where it was described to the Russia President the Brazilian experience in exploring hydrocarbon deposits in the deep-water shelf, and the national program for bio-fuel production, which accounts for 30% of Brazil's total energy consumption. At a meeting with members of the Brazilian business community President Medvedev pointed out that Russian-Brazilian trade volume can reach US$10 billion in the near future and that bilateral relations should give priority to high-tech and energy. He pointed out as well that Russia and Brazil have conditions to lead the world in economic growth and that bilateral cooperation is of major importance for both countries and also for the world. Mr Medvedev emphasized the importance for the two countries to coordinate their foreign and security policies. The President confirmed that a meeting of the BRIC heads of states and governments would take place in Russia in 2009. A Joint Declaration and agreements on military technology cooperation and on visa-free travel between the two countries were signed on the occasion.

Brazil-India. Bilateral relations reached an important phase with the official visit of Prime Minister Indira Gandhi to Brazil in 1968. Various documents were signed on the occasion, and one concrete result of the official visit was an agreement of cooperation that facilitated the celebration of contracts between Brazilian universities and highly qualified Indian professors and researchers, in various fields. Many of those who came to Brazil at the time remained for many years and gave important contributions in their respective fields of knowledge and at the same time formed the basis of an Indian community in Brazil (MENON, 2003).

In January 1996 President Cardoso visited India, as a guest on the occasion of the celebration of India´s Independence Day and as the first Brazilian Head of State and Government to visit that nation. The presidential delegation included ministers, members of the Congress, and business executives. The Joint Declaration signed on the occasion expressed agreement of the two governments on several important issues of the international agenda, such as the need for reform of the United Nations, disarmament, development of tourism, and a more equitable international order, in addition to the intention of strengthening bilateral relations and promoting cooperation in various areas.

The President of India, K. R. Nasrayana, paid a state visit to Brazil during the period of 3 to 8 May 1998. The visit coincided with the celebration of the 50th anniversary of the establishment of diplomatic relations between the two countries. In Brasilia, President Nasrayana was received by President Cardoso, who welcomed him as the first head of the Indian state to visit Brazil. Both Presidents pointed out the ample sphere of mutual interests and great potential for further cooperation between the two states.

In January 2004 President Lula visited India, accompanied by more than 100 Brazilian executives of important firms, by ministers, governors, and members of the Congress. The President was a guest for the official celebration of India´s Independence Day. The visit was also used as part of a strategy to intensify and enlarge bilateral relations. Several agreements of cooperation were signed on the occasion, focusing on areas such space, agriculture, science and technology. Another important event that marked the visit was the Agreement on Preferential Treatment signed between India and Mercosur, as a first step toward a future Free Trade Agreement.

In September 2006 Prime Minister Manmoham Singh visited Brazil to participate in the India-Brazil-South Africa Forum (G-3)

held in Brasilia.[11] The Prime Minister and President Lula maintained private meetings when several aspects of bilateral relations were examined. On his request, the Prime Minister met in Brasilia with a group of academics and intellectuals, and in Sao Paulo he met with a large group of Brazilian business executives. Another important event in bilateral relations was the state visit to Brazil by President Pratibha Patil, on 15 and 16 April 2008. The President visited Brasília, where she was received by her counterpart. On the sideline of the IBSA Summit held in New Delhi on October 15, 2008, the Brazilian President met again with Prime Minister Singh and President Patil.

Brazil and India have demonstrated to share perceptions about questions and problems of interest to developing countries and have cooperated in various multilateral forums, in areas such as international commerce and reform of the United Nations. Brazil has maintained the status of observer in the Non-Aligned Movement, of major importance to India since the times of PM Nehru. Both countries agree that the UN Security Council should expand, to include as permanent members also representatives of developing countries. Brazil and India, together with Germany and Japan, formed the G-4 with the purpose of campaigning for their admission as permanent members of the Security Council. However, they did not succeed in their intent, and did not receive formal support neither from Russia nor from China, permanent members of the Council and BRIC partners. As has been mentioned before, Brazil and India have also formed with South Africa the G-3.

Brazil-China. In October 1881 Brazil and China signed in Tian Jin a Treaty of Friendship, Commerce and Navigation. The Treaty included the establishment of diplomatic relations, the promotion of friendship, freedom for emigration, and the prohibition of the commerce of opium. In 1883 Brazil opened a Consulate in Shanghai, and the Chinese government designated its ambassador to France as non-resident ambassador do Brazil. In 1909 the diplomat Liu Shixun, the Chinese ambassador to France, Spain, and Brazil, visited Rio de Janeiro; the same year Brazil sent a special envoy to China, when the two governments signed The Sino-Brazilian Treaty of Arbitration. The first half of the twenty century was marked by important changes that affected international relations in general and Brazil-China relations in particular, which were interrupted for decades and formally re-established in 1974 (XINSHENG & SHAOXIAN, 2003).

In 1981 the Prime Minister of the PRC, on his way back from a North-South Dialogue that took place in Cancun, Mexico, visited Brazil, being that the first official visit to Brazil by a head of the Chinese government. The first Brazilian president to visit the PRC was João Batista Figueiredo, in May 1984. On the occasion the Chinese leader Deng Xiaoping described his theory of a so-called "dichotomous international system": East-West and North-South. Deng believed that the most important issues that the world was facing were to reduce East-West confrontation in order to maintain peace and promote international development and thus narrow the gap between North and South.

In his Message to the Congress at the beginning of 1987 President José Sarney pointed out his intention to intensify cooperation with important developing countries, like China and India. In keeping with his promise, from 30 June to 10 July 1988, he visited China, accompanied by a large delegation of ministers, members of the Congress, diplomats, businessmen, and intellectuals. Several agreements were signed on the occasion, including one for the joint construction and launching of earth satellites. In 1990, Yang Shangkun, China´s President, visited Brazil and other Latin America countries. On the occasion he declared that the guiding principles of the Chinese-Latin America relations were: 1) to establish and develop friendly relations and cooperation with all countries of the region, 2) open future commercial relations and scientific and technological cooperation 3) mutual respect to tradition and values, and 4) frequent consultation, mutual support and strong cooperation in international affairs.

In 1992 PM Li Peng participated in the World Conference on Environment held in Rio de Janeiro (Rio-92). On the occasion the PM and President Fernando Collor de Mello maintained consultations on bilateral matters and international issues. The following year President Jiang Zemin visited Brazil, when the Chinese leader and then Brazilian President, Itamar Franco, announced an agreement to form a strategic partnership, as proposed by the Chinese leader Zhu Rougji during a visit to Brazil a few months earlier. In his address to the Brazilian Congress President Jiang pointed out the importance of both countries for South-South cooperation, for world peace, and for the progress of humanity; he stressed China´s interest in broadening cooperation with Brazil as part of the process of South-South cooperation.

In December 1995 President Cardoso visited China, where he was received by President Jiang Zemin. The two leaders exchanged views on various themes of the international agenda, and reiterated their support to a multi-polar world order in the 21st century. They expressed their confidence that the strategic partnership between the two countries would be an important mechanism to strengthen bilateral relationships. In November 2001 President Jiang Zemin paid a visit to Brazil, invited by President Cardoso, who affirmed that Brazil warmly welcomed President Jiang for his second official visit to Brazil, declaring that significant progress had been made in friendship and cooperation since his last visit. He expressed confidence that Jiang´s visit would contribute to enhance the two countries strategic

11 Invited by the Indian Embassy in Brasilia, the author of this paper, with a group of Brazilian academics and intellectuals, met Dr. Manmohan Singh in Brasilia, on request of the PM, when he answered questions related to India-Brazil relations and also with respect to India as an international actor.

partnership. On the occasion President Jiang suggested that the two countries should maintain top level contacts, promote mutual cooperation in science and technology as well as in other areas, expand bilateral trade and investment, and support each other in regional and international affairs.

In May 2004 President Lula and a delegation of more than 400 businessmen, political leaders and intellectuals, visited China, when several diplomatic and commercial documents were signed, as well as agreements in science and technology, education and culture. On invitation of President Lula, and on his way to attend the 12th Meeting of APEC, in Santiago, Chile, President Hu Jintao arrived in Brasilia on November 11, 2004, starting a state visit with the purpose of deepening further the cooperation in all areas between the two countries. In a speech upon his arrival President Hu pointed out that both China and Brazil, as large developing countries face the task of economic development and improvement of people´s life. He also pointed out that China gives high priority to the development of relations between the two countries and would work with Brazil to further promote their relationship to the highest level. Another meeting between the two presidents occurred on the occasion of the XXIX Olympic Games held in Beijing in August 2008, when they emphasized the mutual desire to strengthen the quality and intensity of bilateral relations.

On May 18-20, 2009 President Lula paid another state visit to China. The two presidents reached consensus on deepening bilateral relations and decided to formulate a Joint Action Plan. According to President Lula this new Joint Action Plan "will lay the new foundations to an expanded cooperation for 2010-2014"[12] A total of 13 cooperation agreements were signed in areas such oil, equipments, financing, science, space, law, port, agriculture products, and others. Hu reviewed the 35-year-long diplomatic ties between China and Brazil, particularly the period since the two countries forged strategic partnership in 1993. He pointed out that bilateral relations have advanced, and "bilateral trade volume hit the target three years ahead of time".

The First BRIC Summit. As anticipated, on June 16, 2009, heads of state and government of the four largest emerging economies held their first formal summit meeting in Yekaterinburg, Russia, to discuss an agenda focusing on economic issues and cooperation in the context of the global financial crisis. President Dimitri A. Medvedev, declared that the main point of the meeting was to show that "the BRIC should create conditions for a more just world order". Arkady Dvorkovich, a member of President Medvedev´s economic team, said that Russia would like to diversify its currency reserves away from the dollars, and would buy bonds from Brazil, China and India, "if they bought Russia rubles as a reserve". A statement issued at the end of the Summit Meeting "highlighted the common goals of a 'greater voice' in international institutions and a 'more diversified' global monetary system" (KRAMER, 2009). The final statement pointed out also the important role of the G-20 summits in the process of finding solutions for the end of the global financial crisis and called upon all states and international bodies to act to implement the decisions taken by the G-20 in London. The BRIC leaders reinforced their commitment to advance reforms of the international financial institutions and work to give greater voice to emerging and developing countries. Reforms should follow a series of principles, such as being democratic and transparent.

12 "Brazil´s Lula, on China visit, secures 13 deals", People´s Daily Online, http//www.english.people.com.cn/90001/90783/913200/6661358.html (08/11/2009).

CHALLENGES AND PROSPECTS

Brazil. In recent years Brazil has played an increasingly assertive foreign policy, especially at the multilateral level. President Lula has defended emerging and poorer countries, particularly African ones, where he has been several times during his two mandates. President Lula – and to some extent also his predecessor, President Cardoso – has practiced "Presidential diplomacy" in an effort to promote closer approximation with the three BRIC partners, as well as with other developing countries. Together with the other BRIC members, Brazil has had an active and decisive role in the G-20 agenda as well as in its performance, especially in reference to the financial crisis and on reforms of international finance institutions. Brazil was recently elected non-permanent member of the UN Security Council, for the period of 2010-2011--its 10th election as non-permanent member of the UNSC.[13]

Brazil has had a leading role in the establishment and development of MERCOSUR, and more recently in founding the South American Community of Nations (UNASUR), formally established in Cuzco, Peru, in December 2004, as well as in the organization of the South America Defense Council. UNASUR unites all countries of MERCOSUR and the Andean Community, plus Chile, Guyana, and Suriname. On 10 March 2009 Defense Ministers of all South American countries met at a Summit in Chile to create the South America Defense Council, planned as a diplomatic forum to diffuse regional conflicts, promote transparency in military expenditures and military cooperation for regional security needs.

Brazil has supported the UN Peace Keeping efforts, and participated in its missions. Since its creation in 2004 Brazil has been in charge of the UN Stabilizing Mission in Haiti (MINUSTAH). The Brazilian military contingency is the largest of the 17 countries that have sent troops to Haiti. Before the January 2010 earthquake 1,266 Brazilian military were part of the Mission. And since its creation, a total of 13,323 Brazilian soldiers have served in Haiti. For the

13 An alliance among Brazil, Japan, Germany, and India—the G4—was formed with the purpose of supporting each other´s bid for permanent seats on the UNSC, but their bid was opposed by the USA and other permanent members of the SC, including China.

government, Brazil´s presence in that country falls within the current foreign policy goals, that is, closer cooperation with developing countries, but it means also the country´s involvement and new challenges in regional affairs (MELLO, 2010).

About four decades ago Brazil was going through an era of "economic miracle" and high hopes for a sustained cycle of development and future social well-being. However a series of world and domestic crises, default by the public sector, and hyper-inflation, postponed the dream of sustained development. Instead, Brazil entered a so-called lost decade, with poor economic performance, relatively low or negative GDP, and other indicators that contributed to turn the country into one of the most unequal in the world. Nowadays Brazil is again going through a phase of optimism and a positive international image, in part due to the way it faced and is overcoming the financial crisis that began in September 2008. This positive performance is part of a process of change that began over 15 years ago with the ***Real Plan*** and the consolidation of democracy. No doubt, Brazil has changed, and changed for the better. Notwithstanding persistent limitations, recent indicators show that during the last decade more than 30 million people were incorporated into the middle income bracket and about 20 million are believed to have left behind a life of extreme poverty, thanks to pragmatic socio-economic policies combined with rigid control of inflation (NUNES, 2009).

Millions of persons who earn better wages and have access to credit are buying modern appliances and other consumer goods, new cars, and new homes, despite persistent high interest rates. If predictions by both government and private sector analysts are confirmed, and if the future government (to be elected in October 2010) maintains sound and responsible socio-economic policies, Brazil is expected to grow at 5% to 7% annually. But of course there will be a lot more to be done. Cited in a recent article (NUNES, 2009), the Brazilian economist Eduardo Giannetti da Fonseca points out that in the last decade or so Brazil has experienced a "cyclical recovery" and the new challenge should be sustained development. He says further that the secret of success will be the qualification of human resources, which will require massive investment in education, science and technology. We should add that other sectors also deserve special attention, such as a better control of government expenditures and a reform of the traditional and inefficient bureaucratic machine, the modernization of the public health system, of the excessively high and unfair tax system, in addition to a constant fight against corruption which has become endemic at all levels of government.

Brazil requires a minimum of 8 years of formal education for its children, while most other countries set a minimum of 10 to 12 years, or more. Célio Cunha, a Brazilian university professor and UNESCO education expert, is quoted as saying, with respect to the Brazilian educational system, that class materials do not reflect daily practical problems (NOBRE, 2009). This weakness has a direct impact on the lack of preparation of young people for the job market and the relatively high rate of unemployment due to lack of qualification. Many studies have confirmed what most unemployed young people already know: that their low level of formal education and lack of professional qualification are the main obstacles to employment, and when employed, to better positions and better wages. Therefore, public policies that will contribute to overcome these and other weaknesses of the educational system are challenges faced by the future government to be elected in October 2010.

GHOSH et al. (2009) cite remarks made by the European Commission with respect to political and social challenges in Brazil, which are relevant in the present context: (1) difficulties of organizing a parliamentary majority given the present political system, with an excessive large number of parties, some of them mere instruments of interest groups; (2) fragile links between the three levels of government—federal, state, municipal, making it difficult to define and implement policies and reforms nationwide; (3) corruption and unlawful use of public resources, practices frequently denounced by the press but which remain unpunished due to judicial and political maneuvers; (4) legal and regulatory complexity and the need to improve the functioning and modernization of the judiciary system; (5) the need to implement the existing legislation on human rights; (6) violence--serious in large cities and frequently associated with drug trafficking and social exclusion. With respect to Brazilian fiscal policy the following challenges have been pointed out by GIAMBIAGI (2007): (1) increase public investment; (2) reform the tax system; (3) control the expansion of the internal debt; (4) obtain nominal surpluses in the coming years; (5) control government expenses; 6) update the country´s statistical indicators.

Although Brazil was not as badly affected by the financial crisis as Russia and as some developed economies, contrary to over optimistic statements frequently made by the government, it was also strongly affected. For example, Bovespa—the Brazilian stock market, which had substantial gains in 2007, suffered big losses in 2008. Although the index recovered somehow in 2009, it did not reach pre-crisis levels, and as part of the trend, the country faced capital outflow mainly in 2008 but also in parts of 2009.

During the last two quarters of 2008 and most of 2009, Brazilian exports shrank due to the world recession, accompanied by lower prices of Brazilian agricultural and mineral commodities in the world market. A recent study conducted by Mario Cimoli, Giovani Dosi, professors at the School of Advanced Studies of Pisa, Italy, and Joseph Stiglitz, Nobel Prize winner in Economics (CIMOLI et al., 2009), alert that emerging countries like Brazil cannot base their development strategies aiming at the eradication of poverty and inequality "on the agriculture sector, on natural resources, nor on the commerce of commodities". The study points out that Brazil would

need today “more Embraers”.[14] Professor Dosi mentions that one of the difficulties that Brazil faces nowadays to achieve the same levels of development as China and India is the lack of policies to promote high technology. The authors argue that the bases of the Consensus of Washington – liberalism and privatization – should be substituted by broader, more ample strategies of industrial development. Therefore, these are additional challenges faced by emerging countries, and particularly by Brazil.

In the past the Brazilian economy has been mostly service and domestically oriented, given its relatively large market. But with the development of manufacturing industries during the last decades, especially those that are more sophisticated and value added, such as the aircraft, the automobile, the bio-fuels and others, there has been an effort to promote a manufacturing export model. An important development in this direction was the creation of the Brazilian Trade and Investment Promotion Agency in 1997. In 2003 it was restructured as an autonomous agency linked with the Ministry of Industrial Development and International Trade, under the name *APEX-Brasil*. Its main objective is to promote the exportation of Brazilian products and services, and to contribute to the process of internationalization of Brazilian companies (www.apexbrasil.com). In addition, the government has created new incentives for technological development, has allocated more funds to R&D, and as a result the country has improved its international competitiveness. However, it needs further development in this area, heavy investment in infra-structure, and the adoption of policies and measures designed to eliminate bureaucratic and fiscal barriers that keep the export sector far behind its potential.

Russia. With the collapse of the Soviet Union, political changes in Eastern and Central Europe, and the fall of the Berlin Wall, there was for a while hope that Russia and the West would develop closer relations and meaningful partnerships. But apparently both Russia and Western countries were unable to reconcile historical differences. Perhaps as an alternative, at the beginning of his second administration President Vladimir Putin attempted to strengthen relations with most of the former Soviet Republics, apparently in an effort to revive and transform the Commonwealth of Independent States (CIS) into a power center. At the same time his domestic and foreign policies tended more toward nationalism.

In May 2002, under President Putin´s leadership, the Collective Security Treaty of CIS was renamed Collective Security Treaty Organization (CSTO) with the main objectives of guaranteeing territorial integrity of the member states and seeking cooperation with the UN and other multilateral organizations such as the Organization for Security and Cooperation in Europe and the Shanghai Cooperation Organization. CSTO members are Russia, Armenia, Belarus, Kazakhstan, Kyrgyzstan, and Tajikistan. Russia is clearly the dominant member of the Organization, and one question that deserves further consideration is whether this situation limits membership since more independent-minded countries such Uzbekistan, Turkmenistan, Azerbaijan, Moldova, Georgia, and Ukraine are not members; the latter two are potentially NATO members and Moldova seems interested in joining the European Union. In 2006 Uzbekistan rejoined CSTO, but since then Uzbek President Islam Karimov seems more interested in closer relations with the USA. Also, Belarus and Kazakhstan appear increasingly more independent from Moscow. Therefore, there are indications that The Kremlin is encountering some difficulties in its efforts to rebuild a strong organization under its leadership, and it seems that in view of such a difficulties Moscow would be shifting and strengthening its strategy to bilateral relations with some former Soviet Republics (www.globalsecurity.org; www.jamestown.org , 10 Dec 2009).

Russia is a member of the Shanghai Cooperation Organization (SCO), created in June 2001, in Shanghai, by the following countries: The People´s Republic of China, the Russian Federation, the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan and the Republic of Uzbekistan. India, Iran, Mongolia, and Pakistan are observer states. Its main objectives are to strengthen mutual confidence, promote cooperation in politics, trade and economy, science and technology, education, culture, energy, transportation, tourism, environmental affairs, and other areas. SCO works to keep peace, security, and stability in the region. The Heads of States Council (HSC), the governing body of SCO meets once a year to deliberate about multilateral cooperation and other matters, and decide on the Organization´s annual budget. Besides the HSC, other mechanisms meet periodically to deal with SCO agenda. Given the fact that the SCO was an initiative of the Chinese government, one would infer that Beijing plays a leading role in the SCO. However, it is not quite clear what kind of role is played by Moscow (www.sectsco,.org/EN/secretary.asp, 10 Dec 2009).

In August 2008, just before the global financial crisis, the Russian economy was relatively stable and performing well; its Central Bank held close to 600 billion dollars in gold and currency reserves, the third largest in the world, after China, with more than $1,8 trillion at the time, and Japan, with more than $1 trillion.[15] The Russian government was working to make the ruble a reserve currency of Eurasia. Its privileged economic condition and huge reserves derived mainly from the high price of oil in the world market. But the financial crisis that started in the USA in September 2008 and the sharp decrease in the price of oil inevitably led to a shrinking also of Russia´s GDP and to a considerable devaluation of the ruble. Thus, it would be interesting to examine in more detail whether the Russian economy would still have the muscles to make the ruble an

14 Embraer is a successful Brazilian aircraft manufacturer; the third in the world, after Boeing and Airbus. It builds and sells mid-size modern passenger jets (about 50 to 120 seats), sophisticated executive, and military aircrafts.

15 Kommersant, Russian Daily on line, 07 Aug 2008, www.kommersant.com, 10 Jan 2010.

international reserve currency, and how this would affect Russia´s economic position in the region.

HARDING (2009) reports that the social cost of the economic crisis in Russia became clear when new data published by the Russian Statistical Commission revealed an increase of 30 percent in the number of families living below the poverty line, defined in the Russian context as an income of less than US$ 6 a day or 180 per month for an adult. And this occurred after the Russian people saw their living standards improve significantly. Harding quotes the Russian economist Dmitri Butrin, in an article published in the newspaper ***Kommersant***, as writing that according to the official index, the number of poor people increased by 6 million, and what was achieved during 2000 and 2008 was lost. This is another aspect that deserves further analysis, that is, to what extent the global crisis and the measures taken by the Russian government affected negatively living conditions of the Russian people.

In 2009 the Russian economy had the worst performance among the 20 most important economies of the world. According to international analysts and some organizations such as the European Bank for Reconstruction and Development and the World Bank, such a bad performance can be attributed to inefficient and corrupt administration of large state monopolies (Gazprom, Russian Railways, Russian Technologies, and others, such as government controlled banks). Some analysts have pointed out that as a result of the expansion of state control the Russian economy became less competitive and business atmosphere has deteriorated. On the other hand, it would appear that the Russian people are increasingly more aware of these difficulties and have become more outspoken to the point that some observers believe that the political climate resembles that of the Glasnost period (ASLUND, 2010). On the other hand, results of public opinion polls repeatedly show that both President Medvedev and PM Putin remain very popular among the Russian people.

As a result of centuries of territorial expansion and conquests, Russia became a huge multi-ethnic and multi-cultural empire. Russia was also the most important and the dominant member of the USSR. With the collapse of the USSR the Russian Federation, officially created on 26 December 1991, was internationally recognized as a natural heir and took over all responsibilities of the former USSR, including its external debt, although the Russian population represented only about half that of the USSR at the time of dissolution. Today the Russian population represents almost 80 percent of the Federation; the other 20 percent are composed of ethnic groups in various regions of the country. The Federation is composed of 83 units that differ in terms of autonomy in relation to the Federal Government.16

16 The 83 units are composed 46 oblasts (provinces), 21 republics (nominally autonomous), 9 krais (territories), 4 okrugs (autonomous districts), 1 autonomous oblast (Jewish oblast), 2 federal cities (Moscow and St. Petersburg).

With the dissolution of the USSR and the independence of former Soviet Republics, some of the units of the Russian Federation also started secession movements, such as Chechnya, Dagestan and Ingushetia. Other areas of conflict have been Nagorno-Karabakh, involving Armenia and Azerbaijan, Abkhazia and South Ossetia, breakaway territories from the Republic of Georgia, which caused the Russia-Georgia War (08 to 22 August 2008). These and other conflicts show that it has been difficult for the Russian government to maintain full control over some areas in its own territory and in what is regarded as its zone of influence, and in the opinion of some observers this would be mostly due to its insistence on a *hard power strategy* (TRENIN, 2009). Others have pointed out the danger that some extremist groups already operating in many of these areas might turn the whole mountainous region into a base similar to that already existing in Pakistan. One should consider also that since 1994, with the first Chechnya war Russia has suffered many terrorist attacks, in subways, aircrafts, mass hostages, theaters, schools, and so on.

As the dominant and most important member of the USSR, a superpower along the decades of the Cold War, and its heir, Russia remains a nuclear superpower since it has the largest arsenal of nuclear weapons in the world; it has a pioneer and unique record in aerospace research and achievements; and is one of the five permanent members of the UN Security Council. Therefore, one can understand that it has been particularly difficult for Russian leaders to accept a declining role of their country in the international arena, in addition to NATO´s expansion and the US presence in Eastern Europe and in some of the former Soviet Republics. In a speech at the Munich Security Conference 2007 then President Putin presented what was generally interpreted as a reaction to this humiliating situation. He made it clear that Russia was against the US “global supremacy”, and considered NATO´s expansion to Eastern Europe “a provocation”. President Putin´s speech was interpreted by some observers as a clear message that Russia intended to maintain an important presence in global affairs and that its security interests should not be ignored. On the other hand, others suggest that Russia can play a more useful and relevant role in its neighborhood and in the globalized world if it adopts a new foreign policy in which *soft power* would be a central strategy (TRENIN, 2009).

In addition to what has been mentioned so far, another main challenge faced by Russia is whether it will be able to diversify its economy toward manufacturing, high-technology—since it is already quite advanced in military technology--, innovation, and services, so that it will depend less on oil and gas. Another problem that the country has to face is the sharp demographic decline—it is already experiencing shortage of labor in many areas, and this problem tends to become more acute in the future. Many observers have also pointed out the need for heavy investment in infrastructure, education, and public health, and other key sectors. Probably in response to these limitations, a long-term modernization

program and a new industrial policy were launched by the Russian government in 2007. One of the proposed objectives is to create conditions for industrial diversification and improvement of the investment climate. The whole program would give priority to more sophisticated and highly technological industries, with financial support from a government-private sector partnership, in addition to FDI. The program would provide the Russian manufacturing sector more competitiveness both at the regional and international levels. Although no reference to the present state of the program has been identified, it is reasonable to believe that it has been postponed in view of the financial crisis.

India. India remains a poor country, but in recent years it has experienced relatively high and rapid economic growth. Its industrial elite as well as many political leaders are optimistic and expect a continued expansion of the economy and particularly of the industrial sector, with new and increasingly higher FDI. The most optimistic ones believe that the Indian economy could grow at a 10% rate if it would improve savings, agricultural production and infrastructure. Indian IT sector achieved international success, and at the same time a vast outsourcing business flourished in the country. These and other initiatives have been successful mainly because the Indians took advantage of a solid dominion of technology and fluency in English. However, many analysts point out serious obstacles which must be overcome before reaching full economic potential. Some of these obstacles would be restrictions imposed by existing labor laws, a traditional bureaucratic structure, high cost of capital, barriers to international trade, bad infra-structure, and huge subsidies which benefit mostly the rich and upper income groups. There is also concern with respect to "new generations" of the reforms initiated at the beginning of the 1990´s by then Minister Manmoham Singh, which might now include privatization of important state controlled enterprises. In view of these and other difficulties many observers find it difficult for the country to attain a sustained economic growth above 7% or 8%. Besides, in the course of the next decades the Indian economy would need to create at least 10 million new jobs every year in order to incorporate the young people who enter the job market annually.

Since independence various separatists, secessionists, ideological, and religious movements and groups fight for autonomy or among themselves. In December 2001 terrorists attacked the Indian Parliament, apparently with the intention of killing Indian political leaders.[17] In February 2002 Hindu activists on the way back from the city of Ayodhya, Uttar Pradesh, were attacked in the city of Godhra, supposedly by Muslin militants; wagons were set on fire and 58 people were killed. A violent reaction followed, with the death of more than 2000 people, most of them Muslins. The state and the federal governments, both belonging to the BJP, were harshly criticized and accused of incompetence and inability to control the situation.[18]

Some of these groups and their attacks are thought to originate in Kashmir. In fact, about three dozens separatist groups met on 10 February 2009 in Srinagar, capital of the Indian-controlled Kashmir, including Hurriyat Conference factions.[19] Over the years India has suffered several attacks, such as the bombing of a Mumbai railway in 2006, the explosion of an India-Pakistan train line in 2007, the coordinated attacks with bombs and gunfire of various sites in the city of Mumbai, which began on 26 November 2008 and lasted for three days. The attacks killed 179 persons, including 22 foreigners, and over 300 injuries were reported (www.mahalo.com/munbai-terrorist-attack, 26 Jan. 2010).

A group named Indian Mujadeen claimed responsibility for attacks in Uttar Pradesh in 2007 and in New Delhi, Jaipur and Ahmedabad in 2008. In addition, a Maoist group called "Naxalites" has emerged across the so-called Indian "red corridor". ZISSIS (2008) quotes PM Manmohan Singh as saying that the Naxalites threat is the "biggest internal security challenge ever faced by our country".[20] The Naxalites are considered left wing extremists which originated in 1967 in Naxalbari, a West Bengal village. In the 1970´s the group split into factions, but reunited around the middle of 2000 to form the Communist Party of India (Maoist), a group that acts with violence allegedly in support of minorities, landless poor, and lower castes.

The episodes briefly mentioned here are just a few of many other similar ones; however, they help illustrate the difficulties and challenges faced by India to maintain internal security and at the same time impose conditions for sustained development, government stability and continuity of the democratic representation that characterize the country´s political system since independence, which is a source of pride for the Indian people. Stephen F. Cohen, a well known Asian expert, quoted by ZISSIS (2008) believes that the unequal distribution of wealth gained from India´s economic growth has fed these extremist groups and that inequality remains a serious problem.

India´s neighboring region is characterized by potential conflicts,

17 On 13 Oct 2005 the first woman suicide bomber of India attacked a military group in Kashmir. A month earlier Maoist terrorists killed 15 persons in the state of Jharkhand; several other attacks attributed to Maoist and extremist groups were perpetrated in the following years, killing and injuring huf innocent persons (See the following Indian newspapers for additional information on attacks by terrorist groups: Hindu (Madras), Hindustan Times (New Delhi), Indian Express (Mumbai).

18 The BJP supported a campaign in the beginning of the 1990´s to rebuild a temple to the Goddess RAM, in the city of Ayodhya, Uttar Pradesh. Hindu extremists allege that the temple was destroyed in the 16th century by invading muslins in order to build a Muslin temple in its place. The campaign resulted in violent fights between Hindus and Muslins in 1992. The new temple was not rebuilt, but the BJP insisted in its construction (LONG, 2004).

19 The All Parties Hurriyat Conference (APHC), an alliance of secessionist parties and leaders, was formed on 9 March 1993 as a political front to further the cause of Kashmiri separatism. The original list included 26 parties. The APHC claims to be the sole representative of the Kashmiri people (www.dnaindia.com/india/report_separatist-held-meetin-in-kashmir_1347794, 15 Feb 2010)

20 The same author writes that "different ethnic and religious groups as well as social classes act like individual nationalities that mobilize support for a cause. If demands are not met, movements turn to extremism"

by border disputes, ethnic and religious rivalries, by the presence of terrorist movements, by large economic disparities, by authoritarian governments, and by the presence in some countries of weapons and drug traffic. These and other conditions contribute to political and social instability in the region, as well for migratory movements and a large flux of refugees mainly in India´s direction. Therefore, India is surrounded by vulnerable or "failed states". It maintains intense relations with Afghanistan since the Taliban's defeat, and has contributed to that country´s reconstruction. However, radical terrorist groups believed to have their base in Afghanistan and/or the Afghanistan-Pakistan porous borders, have reached the Indian-controlled Kashmir and other regions of India through Pakistan, and represent serious security problems not only for India but for the entire region.

Bangladesh and India share a long geographical border as well as history, ethnicities, and a common culture. Indian governments have pressed Bangladesh to exert more effective control over its territory in order to prevent its use by terrorist groups, as well as smuggling, illegal immigration, and the traffic of women and children. The government of Myanmar, controlled by the military, has been accused of being tolerant with drug traffic, prostitution, and inefficiency in the fight against AID which has become a grave public health problem. In addition, the country represents a strategic challenge to India, due to China´s presence and economic and military influence. The victory of the Communist Party of Nepal (Maoist) in the election for the constituent assembly (April 2008) brought hope for peace and change after more than 10 years of internal conflict. However, the fall of the Maoist-led government and the difficulty of arriving at a consensus to form a new government may lead to renewed hostilities and further instability, a situation which would not be in India´s interest. Although defeated by the government of Sri Lanka (May 2009) the Liberation Tigers of Tamil Ealam (LTTE) continue to support a separate state, and the success of the peace process seems to depend on how the Government will promote expected reforms intended to protect the rights of Tamils and other minorities.[21]

With the end of British rule and forced partition (1947) India and Pakistan have fought three wars (1948, 1965, and 1971), and several other conflicts involving mainly Kashmir. Since independence Pakistan has been ruled by military dictatorships for over 31 years, frequently supported by religious extremist groups. The last military regime began in October 1999 with a coup headed by General Pervez Musharraf. Elections were held in March 2008, with the victory of a coalition led by the Pakistan People Party (PPP), headed by Benazir Bhutto until her assassination in December 2007. Accused of direct or indirect complicity in Butto´s assassination and threatened by impeachment, General Musharraf announced his resignation of the

21 The International Crisis Group brings recent reports on the situation of each of these countries-Afghanistan, Bangladesh, Myanmar, Nepal, Sri Lanka, and Pakistan (www.crisisgroup.org/home/index.cfm?id=62698d=1). A more detailed analysis of India and its neighbors is also found in previous works by GUIMARÃES (2006).

Presidency in August 2008. Asif Ali Zardari, Bhutto´s widower and new PPP leader was elected President. The upsurge of violence in Punjab, the Northeast Frontier Province, the Federally Administrated Tribal Areas, and Quetta, capital of Balochistan, poses threats to Pakistani people, to the process of transition to democracy, to India and South Asia security, and also to the international community given the fact that Pakistan has already conducted nuclear explosions (1998) and is believed to own fissile material to produce at least 90 nuclear bombs and the means to deliver them. Besides, the country has a record of nuclear proliferation, as confessed by Dr. A. Q. Khan, its former top nuclear scientist.

According do PANT (2009) the international community expects a more important presence of India in the process of designing a new global order, but India has had little to offer, since its foreign policy is characterized by an "intellectual vacuum". KAPILA (May 2009; Aug 2009) also criticizes India´s foreign policy, arguing that in the first 50 years of its existence India maintained a strategic autonomy of its foreign policy, despite the fact that its national power was much inferior at the time than it is today, when India, "economically vibrant and strong", would be in better conditions "to add muscles to its foreign policy". The author argues further that India has given up its "strategic autonomy" (not to be confused with "non-alignment", he clarifies), and thus "diluted its aspiration to become a global power". He contends that India has not taken advantage of changes in the center of power in the direction of Asia, and that the proclaimed "strategic partnership" India-USA has been reduced to a "strategic relationship". He believes that closer relationships with the USA did not help India and that the USA agenda with reference to Afghanistan and Pakistan contradicts India´s interests, and that the USA has not supported India´s candidacy to a permanent seat in the UNSC.

Although recognizing that some Indian political parties and members of the foreign policy ***establishment*** are outdated and preserve a Cold War mentality, BARU (2009) believes that Indian foreign policy is seeking adjustments and is trying to face the complexities of an emergent multi-polar order as well as the strategic consequences of its own economic growth and integration into Asia and the global economy. He points out that despite changes of governments, with opposing political orientations in many aspects, India has maintained continuity in its economic and foreign policies since the end of the Cold War, and this characteristic makes India a trustworthy partner, with long range national interests. He suggests as foreign policy priorities to secure peace and stability in India´s neighborhood, to win the fight against extremism and fundamentalism, and that India should strengthen relations with Asia and Africa, and promote further economic engagement with China.

Despite facing huge domestic and serious regional challenges, there are several reasons to agree with Indian leaders in terms of their optimistic attitude with respect to a continued development of the Indian economy and the improvement of the socioeconomic

conditions of its immense population. Its potentially huge domestic market is expanding, helped in part by several government programs, such as the Mahatma Gandhi National Rural Employment Guarantee Act 2005, which provides 100 days of employment to every rural household in the country, and has a multiplier effect, combined with another program designed to expand and improve rural infrastructure (http://nrega.nic.in/netnrega/home.aspx). The government has increased significantly funding for education at all levels, as well as for health care. Therefore, while the global financial crisis has affected India, but not as badly as Russia, its economy is recovering faster than anticipated.

China. China´s political and institutional system is today defined as a hybrid of a socialist and market economy, as a result of the process of "building socialism with Chinese characteristics", in which the state controls most of the economy and is controlled by the Chinese Communist Party. However, the process of "building socialism with Chinese characteristics" has not been completed as yet. It began with the gradual reforms led by Deng Xiaoping in 1978: first there were the reforms of the agricultural sector, followed by those of the industrial sector in 1985; reforms of the services sector began in 2001, after the PRC joined the World Trade Organization. It is generally agreed that a number of reforms may still take place in China, such as the legal basis of acquisition and transfer of land (all land in China remains the property of the state), bank reform, social security and health reforms, and others.

For about three decades China´s economic growth has been based on manufacturing exports and FDI. The main attractions by foreign investments are China´s already large and rapidly growing domestic market and economic and political stability. But lately the model has been criticized on the grounds that it is causing, directly or indirectly, many socioeconomic problems, such as high income inequality among different regions of the country as well as between urban and rural populations, in addition to environmental degradation and rapidly increasing demand for energy and consequently the need for heavy investments outside the country in order to secure future supply of energetic resources. In response to some of these problems since 2003 the government has announced a "qualitative growth" policy, which would give special emphasis to domestically oriented development and cleaner and more efficient technologies.

In view of the fact that the financial system in China remains rather closed, the international crisis hit the economy mainly through a decrease in the external demand for Chinese products, especially from the US and European markets, followed by a shrinking of FDI. All this provoked a slowdown in production and a rise in unemployment. To contain the crisis the government decided on a package consisting of billions of dollars of investment in infrastructure, reconstruction of areas that were hit by earthquake, housing, village improvements, public health and education, and so on. Additional measures were adopted to stimulate the economy, as loans to small and medium size firms, cutting off sales tax on cars, household appliances, etc. Thanks to economic resources available, massive stimulus polices and the large domestic market, China was the least of the BRIC countries to be affected by the financial crisis (http://www.china-un.ch/eng/hom/t567708.htm)

One question that remains is whether the Chinese government will continue its policy of stimulus that benefits the domestic market and the "qualitative growth policy", or will go back to give priority to the export model maintained before the crisis. Even with China´s economic growth at the pre-crisis levels, the economy will have to absorb millions of industrial workers laid off during the worse phase of the crisis. Also, one has to consider that the policy of stimulus may result in irreversible changes, such as increased urbanization, expansion of small and medium size firms, new industrial activities (for example, energy-saving technologies), innovation in traditional activities (such as farming), and so on. These and other possible transformations represent new opportunities, but also new challenges.

A recent article (ALLEN, 2010) summarizes reactions to China´s exchange rate policy which has maintained its currency, the yuan, pegged to the US dollar over the years. With the US dollar loosing value in relation to most other currencies, the Chinese fixed exchange rate gives that country excessively high competitiveness. And the losers are mainly emerging economies, including the other BRICs which maintain intensive trade with China. The author cites Roberto Giannetti da Fonseca, Foreign Trade and International Relations director at the Federation of Industries of the state of Sao Paulo, Brazil, who says: the Chinese "gain better conditions [in international trade] not due to efficiency nor to higher productivity, but by simply adopting a policy of pegging the yuan to the dollar. And it is the only [major] currency that is not being valued at this moment of crisis". Fosenca estimates that in view of their fixed and under-valued currency Chinese products, which were already cheap, had their price reduced by 25% to 30% in the course of the last two quarters of 2009. He believes that reactions to this policy have been excessively timid, since most governments do not seem willing to create any problem with China which has become powerful, and despite the financial crisis obtained in 2009 a trade surplus of US$ 196 billion, has accumulated over US$ 2.5 trillion in international reserves, and is expected to overtake Japan and become the second largest economy of the world in the course of 2010.

ALLAN (2010) cites also Sergio Gomes de Almeida, an economics professor at the State University of Campinas, Sao Paulo, Brazil, who has studied China and believes that nothing will change in the short run, as the US dollar will continue to fall, and so will the yuan. And this means an enormous disadvantage to all other countries. The biggest Brazilian problem today "in the international market is China", says Almeida. Other international analysts tend to share this position, and many believe that the Chinese authorities might do something if and only when they consider it in their own interest.

Some observers (FOROOHAR & LIU, 2010) believe that China wants to "push the yuan as a rival to the dollar" and that their efforts "are now making tentative progress. For example, in the last few months, China has inked $100 billion in currency swap agreements with six countries, including Argentina… The yuan has become an official trading currency between Southeast Asia and two Chinese provinces along its periphery. The yuan will next be used as a trading currency with India, Pakistan, Russia, Japan, and Korea´ says Gu Xiaosong, director of the Institute of Southeast Asian Studies in Nanning." According to Foroohar & Liu those countries will eventually be able to use the Chinese currency for deals between each other.

China is developing very fast its technological capability, thanks in part to many Chinese scientists who have returned or are returning home from abroad to do research with plenty of institutional and financial support. As an example, China´s space program is highly developed, and a moon landing is planned for 2013. In 2007 they successfully tested an anti-satellite weapon. Until now the biggest polluted, the Chinese government decided to subsidize green technology, which includes the production of clean-energy vehicles. With improved technology, China will have a huge domestic market for clean cars, and will easily reach a substantial share of the international market (FOROOHAR & LIU, 2010).

Although China has the largest population in the world, due to the one-child policy established in the beginning of the 1980s the rate of population growth is relatively low in comparison to most other countries; on the other hand, it faces a rapidly increase of an aging population, which means dependency, in the relatively near future, of a large proportion of the country´s population on the working and productive segments of society, with potential consequences for future patterns of production and consumption. As already pointed out, the Chinese society presents huge regional disparities, and considerable differences between rural and urban residents, as well as in terms of personal income. There are today hundreds of millionaires or even billionaires in China, while large proportion of the population remains poor and isolated from the rest of the country. One may expect that a large proportion of the fast aging population will join the poor segment rather than the rich one.

In 1912 the Chinese "Republic of Five Nationalities" was proclaimed by Dr. Sun Yat-sen-- the five stars on the Chinese flag reflect this idea. However, it was generally known that China had hundreds of ethnic groups. As an outcome of a research conducted by the newly established PRC in order to identify and classify ethnic minorities, 54 groups were initially recognized as "independent nationalities". In 1979 a 55th group was officially added. These 55 nationalities represent about 8 percent of the population, while the Han majority constitutes the other 92 percent. Some of the minorities exhibit relatively similar traits to the Han people, but others are quite different, physically and culturally, as for example the Turkic groups Uyghur and Kazakhs, or the Iranian Tajik. Chinese official policy opposes forced integration and encourages the maintenance of the history and identity of each nationality; apparently for this reason it has created some autonomous regions (www.c-c-c.org/chineseculture/minority/minority/html, 21 Feb. 2010).

Due to its official population composition, China has been referred to as a country of "1+55"—one refers to the Han majority, and the 55 refers to the other ethnic groups, who although representing only about 8 percent of the population, occupy about 65 percent of the Chinese territory. Therefore, they are thought to hold some leverage: if one ethnic group achieves independence, others may follow suit; hence the central government tight control over all of them, in order to keep all ethnic groups under the "One China policy" (www.globalization.101.org). [22]

Despite the PRC official policy ethnic uneasiness and some conflicts have been observed, especially in Tibet and in the Province of Xinjiang. Tibet was occupied by the Chinese Army in 1950. The occupation was relatively peaceful until 1956, when a rebellion against the presence of the Chinese forces erupted and conflicts lasted until 1959, when the 14th Dalai Lama and Tibetan officials fled to India, where they installed a Government-in-Exile. Over the years the government of the PRC and the Tibetan Government-in-Exile met in an attempt to find a solution to the situation, that is, China claimed sovereignty over Tibet and the Tibetans wanted independence. Tibetans claim that since occupation thousands of Hans have settled in their country and control the economy and all government positions, and that Tibetans are discriminated against and many have lost their properties and businesses for the rapidly increasing Han settlers. On the other hand the Chinese government points out the large investments made in Tibet in line with its efforts to promote development and well-being of the population (DAVID, 2008).

The conflicts in the Xinjiang province involve the Uyghur minority who also claims to be victim of discrimination and fights for autonomy. In an interview given to a Brazilian newspaper (LORES, 2010), an Uyghur, member of the Chinese Communist Party (whose name is purposely omitted), declared that today the Xinjiang province is completely dominated by the Han majority—some years back they were only 4 percent of the local population, now they number more than 40 percent -, transferred to Xinjiang over the years. The person believes that the Uyghur suffer discrimination in schools, in their work, in politics, and in all other spheres of life. The person believes also that both Tibetans and Uyghur are discriminated against because they insist on preserving their history and culture, and that today China substituted Communism for the "nationalism of the Han majority", and that the ideal of a multiethnic China and the concept of "Chinese culture", which are present in the Constitution, were substituted for the "Han culture" and the "Han nationalism". The

22 www.globalization.101.org is a project of The Levin Institute of the New York State University.

last serious conflict involving Uyghur people and the Han majority occurred in July 2009, in Urumqi, capital of Xinjiang. Something like 197 persons were reported killed and more than 1,720 injured.

FOROOHAR & LIU (2010) point out that the rapid changes that are occurring in China are having "a particularly dramatic effect on younger Chinese, turning them inward and making them more nationalistic—a trend that experts like Hudson Institute fellow John Lee believe to be a factor in China´s new and more aggressive policies on security, trade and foreign affairs". Citing other observers, those authors argue that this nationalistic tendency is likely to increase in view of the change of Chinese leadership which is expected to occur in 2012. Those who are looking for leadership positions would rather be perceived as sharing the ideas and values defended by the Chinese majority.

CONCLUDING REMARKS

All four BRIC countries and their societies combine elements of developing countries, of countries in rapid transformation, and of modernizing nations. They exhibit some common features and at the same time significant differences in terms of historical, social, cultural, political aspects, as well as in military capacities—except for Brazil, the other three countries maintain strong defense systems including nuclear capabilities, and Russia and China are permanent members of the UNSC. They all have continental land size and large populations, besides many common challenges, such as large domestic markets while their economies pay relatively lower wages and have lower productivity than most developed economies; as a consequence they have a large number of poor people, although they maintain relatively successful anti-poverty programs. Russia, India, and China face internal ethnic and religious conflicts; Russia and India have had frequent problems with terrorist attacks, while Brazil is free from these types of disturbances.

Their undeniable improvement of living standards, particularly in Brazil, India, and China, means not only higher GDP for each of these countries, but higher purchasing power achieved by their new middle income groups also help the world economy recover from the worse financial crisis since the 1930s. A sizable middle class of more than 300 million persons is today identifiable in China, around 200 million in India and more than 100 million in Brazil. And the tendency is for a gradual enlargement of these middle income brackets.

According to a recent study by KHARAS (2010), sponsored by OECD, the middle class is rapidly increasing all over the world, and all new members of this middle income group will live in emerging countries, like the BRICs. The study shows that by 2030 the middle class will represent more than half the world population.[23] One important economic characteristic of new members of this growing middle class is their capacity and willingness to spend a considerably large part of their income in items other than house and food, since they do not need to think all the time about how to survive, and in general they have high achievement motivation, that is, they want to improve constantly their life style and invest in education and the future well-being of their family and children. Therefore, the new middle class has an important role in economic growth, and their participation in their respective domestic markets tend to increase significantly, as already observed during the financial crisis, especially in China, India, and Brazil.

It has been demonstrated that interest in mutual approximation among the four countries existed much before the studies conducted by O´Neal and associates and the creation of the BRIC acronym. From the part of Brazil, for example, such an interest was expressed by all presidents since João Baptista Figueiredo (1980-1985). As a Chancellor and later President of the Republic, Fernando Henrique Cardoso expressed on different occasions the importance he attributed to China, Russia, and India. In his inauguration address, he mentioned that these countries, due to their continental size, face difficulties which are similar to Brazil´s own problems. He further emphasized that the four countries have shown common efforts and should work together to promote economic and social development.

In his inauguration address (January 2003) President Luiz Inacio Lula da Silva also pointed out the importance which he attributes to developing countries, and declared his intention to deepen relations with large emerging nations such as China, India, Russia, among others. As a guest speaker at the opening of the "Seminar Brazil-China: A Necessary Step Forward" held in Rio de Janeiro in April 2003, the President stressed the importance of Brazil-China relations, when he reminded that in 2004 the two countries would celebrate 30 years of the establishment of diplomatic relations, and the event should be commemorated with the renewed commitment to elevate bilateral relationship to a new and unique level. Similar interest in approximation and deepening of relations has been expressed by all heads of state and government of the other BRIC countries. Another evidence of mutual interest is the fact that the BRIC foreign ministers have met annually since 2006. Finance ministers and central bank governors meet frequently, in addition to other government officials, and more recently, several private organizations.

Therefore, Jim O´Neal´s and associates´ main contribution was to show, through sophisticated quantitative analysis of empirical data, the potentialities of the BRIC´s economies, individually and as a group. At the same time, the important role played by the four countries in different multilateral contexts, but especially during the

23 By OECD criteria members of the middle class are those families that earn between 10 to 100 US dollars per day.

financial crisis, contributed to strengthen mutual ties and the will to act as a political forum. In other words, most probably O´Neal and his associates did not imagine at the time of their pioneer studies that less than ten years afterwards their idea and essentially economic projections would become the basis for a semi-institutionalized political entity.

The original proposal was that the BRICs would become central economic hubs in their respective regions and eventually at the international level. However, today´s reality is that China is developing at a much faster pace than its BRIC partners (especially faster than Brazil and Russia); it is also taking important economic and political initiatives involving other countries; therefore it might be the only real power in the 21st century. It is already viewed as a strong military power, and continues to invest heavily in defense and in sophisticated and military-relevant research. India may follow China, but at a slower pace. However, the two countries have yet to overcome serious challenges at their domestic level (and India also at the regional level), as well as pending territorial and other disputes (PEER, 2010). Brazil and Russia have shown to be the least emergent powers, although they are both taking political and economic steps that might contribute to change such a scenario in the long run. Russia is updating its space, aircraft, and military industry and has a long term plan for industrial diversification and development. Brazil is also investing more in R&D and in science and technology. In an interview to a Brazilian newspaper (NETTO, 2008), Alain Torraine, a well known French sociologist and a Brazilianist, declared that “Brazil can be a bridge between “East and West, North and South”, or “the political bridge of the globalized world”. He believes that since Brazil does not have conflicts with its neighbors or with any other country, it can easily dialogue with the US, with Europe and with China. When comparing Brazil and Europe, he says: “Europe is economically more important than politically. Brazil is more important politically than economically”.

However, the BRICs, individually and as a group, have considerable economic weight: they represent the only emerging economies with annual GDPs above 1 trillion US dollars, making them the largest economies outside the OECD; during the world financial crisis they maintained better growth rates (with the exception of Russia) than most developed countries, and their performance helped sustain the world economy as whole; all four BRIC countries have large foreign-exchange reserves—as already pointed out, China has the largest share, in addition to being the second largest net creditor in the world, after Japan.

To achieve their growth, each BRIC country has pursued different strategies. Brazilian economy, with a relatively large private sector, has been mainly domestic and service oriented, and FDI plays an important role. Russia moved from central planning to a market economy, but recently has re-centralized important sectors. FDI was quite important during the process of privatization, but its influx has declined considerably. The Indian development strategy is based mainly on export of services, especially IT, but also on some manufactured goods, such as pharmaceutical and chemical products. The agricultural sector plays a major role in the GDP as well as the private sector. It has changed the rules to attract FDI. China´s economic development has been based only on manufacturing exports and FDI. Recently it has adopted a “qualitative growth model”, which emphasizes domestically oriented growth. Therefore, in spite of basic differences one can observe also some common features in their recent development strategies, that is, more export oriented policies (especially in Brazil, India, and Russia), efforts to reach a higher level of industrial diversification aiming at more high-tech and value-added products.

The official visits by heads of states and governments, summits and meetings on the sidelines of several different international organizations and forums, and the first BRIC summit – that means diplomacy at the highest level -- have become an extremely important and effective mechanism in the processes of promoting mutual knowledge, consolidating partnerships and strengthening friendship ties among the four countries. These efforts and initiatives reflect political will to promote closer and deeper ties as well as convergence of positions with respect to the main issues that are part of the global agenda; they also reflect concern for security, in its various spheres, including energy and food security, common views in support of multilateralism, and a commitment to work jointly toward a more equitable distribution of wealth and power in the world.

Some projects of cooperation among the BRIC countries already exist, especially in science and technology; one of the most important and successful ones being the China-Brazil project for the construction, launching and monitoring of earth satellites. However, bilateral relations have privileged, to a large extent, the commercial area, even though the volume of trade between Brazil and the other three partners is still relatively small given the size and potentialities of their respective economies. Table 7 (Annex) shows trade volumes (total export and import values US$ FOB) between Brazil, Russia, India, and China. The data show increases up to 2008, and a significant decrease in 2009, which can be attributed to the world financial crisis. China has become the most important Brazilian trade partner in Asia and one of the most important commercial partners in the world. Although the total volume of Brazilian exports in 2009 was about 20% lower than in 2008, the volume of Brazilian exports to China from January to November 2009 showed an increase of 20% in relation to the previous year, reaching almost US$19 billion.

The general purpose of this paper was to examine the main characteristics of the BRIC countries, describe and analyze their regional and international roles, identify and better understand their mutual relationships as well as challenges and prospects faced by each of them and as a group. Given the vastness and complexity of

the theme, what is presented here is necessarily partial and limited to the highlights of some of the aspects focused. A more detailed and more profound analysis of the high level diplomacy, for example, such as the summits agendas, their outcome, concrete projects or initiatives already approved and being carried out, would represent additional contribution to mutual knowledge and future cooperation. Likewise, it will be useful to analyze, on a comparative basis, the BRICs foreign and security policies, as well as their commitments to regional and multilateral organizations, and their possible impact on the group and its performance. These and other specific aspects of the BRICs as a political forum could be part of a research program to be carried by the BRIC Research Network Center.[24]

24 As part of the International Academic Conference on BRIC held between 26th and 28th November 2009, the Macau Multi-Disciplinary Center for BRIC Research was created "aiming at organizing studies, publications, conferences, seminars and become a depositary research database on BRIC studies". The Center body of coordinators is formed by: Dr. Gary Ngai (President of the Executive Board of MAPEAL), Prof. Ivo Carneiro de Souza (Vice-Rector of Macau Inter-University Institute), Prof. Lytton L. Guimaraes (Brazil), Dr. Vladimir Davydov (Russia), Prof. Abdul Nafey (India), Prof. Jiang Shixue (China).

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Table 1. Human Development Index 2007 and its Components for the BRIC Countries

HDI & Components \ Countries	Russia	Brazil	China	India
HDI rank	71	75	92	134
HDI value	0.817	0.813	0.772	0.612
Life expect. at birth (years)	66.2	72.2	72.9	63.4
Adult literacy rate aged 15 +(%) 1997-2007	99.5	90.0	93.3	66.0
Combined gross enroll. ratio in ed. (%)	81.9	87.2	68.7	61.0
GDP per capita (PPP US$)	14,690	9,567	5,383	2,753
Life expectancy index	0.686	0.787	0.799	0.639
Education Index	0.933	0.891	0.851	0.643
GDP index	0.833	0.761	0.665	0.553

Source: UNDP, Human Development Report, New York, 2009, Table H.

Table 2. Human Development Index Trends for the BRIC Countries (1980-2007)

HDI Trends (years) \ Countries	Russia	Brazil	China	India
1980	..	0.685	0.533	e0.427
1986	..	0.694	0.556	0.453
1990	0.821	0.710	0.608	0.489
1995	0.777	0.734	0.657	0.511
2000	..	0.790	0.719	0.556
2005	0.804	0.805	0.756	0.596
2006	0.811	0.808	0.763	0.604
2007	0.817	0.813	0.772	0.612
Av. Annual Growth (%)	..	0.63	1.37	1.33

Source: UNDP, Human Development Report, New York, 2009, Table G.

Table 3. Demographic Trends for the BRIC Countries (1990-2020)

Dem Trends \ Countries		Russia	Brazil	China	India
Total population (millions)	1990	148.1	149.6	1,142.1	862.2
	2007	141.9	190.1	1,329.1	1,164.7
	2020	135.4	209.1	1,431.2	1,367.2
Urban population (% of Total)	1990	73.4	74.8	27.4	25.5
	2010	72.8	86.5	44.9	30.1
Child dependency Ratio	1990	34.3	58.5	42.9	64.9
	2010	20.8	37.7	27.7	47.9
Old age dependency Ratio	1990	15.1	7.4	8.3	6.6
	2010	17.9	10.2	11.4	7.7

Source: UNDP, Human Development Report, New York, 2009, Table L.

Table 4. Economy and Inequality for the BRIC Countries (1990-2007)

Econ. & Inequality	Countries	Russia	Brazil	China	India
GDP	US$ billions 2007	1,290.1	1,313.4	3,205.5	1,176.9
	PPP US$ billions 2007	2,087.4	1,833.0	7,096.7	3,096.9
GDP per capita	Annual growth rate at constant prices (%) 1990-2007	1.2	1.2	8.9	4.5
	Highest value in period 1980-2007 PPP US$	14,690 (2007)	9,567 (2007)	5,383 (2007)	2,753 (2007)
Average annual change in CPI index (%)	1990-2007	44.4	67.6	4.4	6.8
	2006-2007	9.0	3.6	4.8	6.4
Share of income or expenditure (%)	Poorest 10%	2.6	1.1	2.4	3.6
	Richest 10%	28.4	43.0	31.4	31.1
Inequality measures	Richest 10% to Poorest 10%	11.0	40.6	13.2	8.6
	Gini Index	37.5	55.0	41.5	36.8

Source: UNDP, Human Development Report, New York, 2009, Table M.

Table 5. Human and Income Poverty for the BRIC Countries (2000-2007)

Human & Inc Poverty	Countries	Russia	Brazil	China	Índia
Human poverty index (HPI-I)	Rank	32	43	36	88
	Value (%)	7.4	8.6	7.7	28.0
Adult illiteracy rate age 15 + (%) 1999-2007		0.5	10.0	6.7	34.0
Population not using improved water source (%) 2006		3	9	12	11
Population with income up to (%)	$1.25/day 2000-2007	<2	5.2	15.9	41.6
	$2.00/day 2000-2007	<2	12.7	36.3	75.6

Source: UNDP, Human Development Report, New York, 2009, Table I.

Table 6. Expenditures with Health and Education by the BRIC Countries (2000-2007)

Health & Education \ Countries		Russia	Brazil	China	India
Public expenditure on health	per capita PPP US$ 2006	404	367	144	21
	% of total govt expenditure 2006	10.8	7.2	9.9	3.4
Pub. expend. on education (% of total govt exp. 2000-2007)		12.9	14.5	..	10.7
Aid allocated to social sectors (% of total aid) 2007		..	46.3	56.4	46.6
Healthy life expectancyat birth (years) 2007		65	66	68	57

Source: UNDP, Human Development Report, New York, 2009, Table N.

Table 7. Trade volumes (total export and import values US$ FOB, millions) between Brazil and Russia, China, and India for the years 2000 to 2009.

Years	Russia		China		India	
	Exp	Imp	Exp	Imp	Exp	Imp
			1.085.301	1.222.098	217.450	271.355
			1.902.122	1.328.389	285.407	542.790
			2.520.978	1.553.993	653.737	573.183
2003	1.500.225	555.155	4.533.363	2.147.801	553.696	485.743
2004	1.658.048	808.034	5.441.745	3.710.477	652.553	556.069
2005	2.917.434	722.131	6.834.996	5.354.519	1.137.930	1.202.914
2006	3.443.427	942.556	8.402.368	7.990.415	938.889	1.473.951
2007	3.741.295	1.710.087	10.748.813	12.621.273	957.854	2.169.274
2008	4.652.978	3.332.018	16.403.038	20.044.322	1.102.342	3.564.306
2009*	2.613.614	1.209.306	18.830.478	14.451.593	2.919.770	1.906.185

Source: Brazil, Ministry of Industry, Development and Trade, http//www.aliceweb.desenvolvimento.gov.br (Jan. 10, 2010)
*From January to November 2009.

A QUADRIGA OF POWER CALLED BRIC

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INTRODUCTION

Considering its possession of 21% of global fresh water reserves, of a territory which happens to contain the world's largest single body of groundwater, the Guarani Aquifer, and its possession of 30% of Earth's tropical forests, Brazil undoubtedly is endowed with the status of an 'environmental power'. Nevertheless, its elites in power and their constant historical zeal for maintaining social apartheid prevent this nation from assuming the projection that it really deserves in international relations.

The gigantic oil reserves found in the pre-salt layer, estimated in 50 billion barrels, secure for this 'petropower' in formation a privileged position among the members of the new quadriga of power, which is comprised of Brasil, Russia, India and China. Given that Norway is the only large oil exporter to achieve social, political and economic development, this article outlines the challenges that Brazil will face in the BRIC context.

BRAZIL: ENVIRONMENTAL AND ENERGY POWER

In a context of transformations of world economies, a democracy that heralds the banner of sovereignty to avoid its obligations against deforestation will hardly be able to add value to the products that it exports, and reach the level of scientific development presented by Russian, Indian and Chinese partners.

Brazil is the only member of the BRIC group that renounced nuclear weapons, but this is not the reason why it has lagged behind the others in terms of technological innovation. The low salaries of researchers and the negligence with which science is treated led to the training of legions of lawyers, but very few physicists, chemists and mathematicians. In the wardrobe of nations, partners dress Brazil up with the garments of an agroenergy power, after a striptease that left it without its natural attire, which originally displayed its environmental power.

Mediocre investments in public goods, the terrible quality of what is offered to the low-income consumer, deforestation, and laws that make this country what it is, hinder Brazil's presence among the BRICs as a true environmental superpower. Indians detonated their first atomic bomb in 1974, ten years later than the Chinese. Brazil, on the other hand, has a GDP per capita superior to either India or China. In May 2008, when for the first time the four leaders met during a summit held in Yekaterinburg, Russia, the new quadriga of great global opportunities represented 23% of global GDP and 70% of the planet's dry surface.

After suffering from “Third-Worldism”, while currently in a new ambiance, more hopes are forged than alternatives in this informal but extremely relevant international organization in world politics. Faced with the “decipher-me-or-I’ll-devour-you!” dilemma, they avoid touching the sphinx of American economic instability manifest in the dilemma of the dollar, which departed decades ago from the gold standard but nonetheless maintains the ambiguous and infamous role of sole global currency reserve.

Somewhat ironically, the last letter of BRIC corresponds to the economic power that controlled, in 2006, 6.7% of total world imports and 8.5% of world exports. The first letter of the acronym refers to the country that is most immune to plummeting international demand, since it is responsible for merely 1% of world commerce. Even though it possesses a considerable share of the urbe et orbe’s natural resources, social inequalities in Brazil hinder its development. Therefore, whether part of BRICs or not, it is a true miracle that Brazil has maintained its unity as a nation in spite of the manipulative elites embedded in the judiciary, legislative and executive powers.

Part of the routine of societies that tolerate the laundering of resources in detriment of infra-structure improvements, in both Russia and Brazil, the waste of energy is reinforced by outdated technical machinery in hydroelectric plants with maintenance of doubtful quality. Waste is also caused by the poor conservation of motorways and the inadequate regulation of automobiles, especially trucks. The lack of collective means of transport motivates the option for individualized transport, and creates alliances between the automobile industry and the road construction policy community, which fails to realize that cutting through forests for roadbuilding harms the potential use of navigable rivers and the development of the long forgotten railway network. Moreover, the highways that tear the Amazon apart disseminate underdevelopment throughout the interior and propagate conflicts between the clean forests and the dusty cities.

FOOD SECURITY IN THE BRICS PARTNERSHIP

In Brazil, as in India, sugar cane’s productive process requires immense quantities of water that reveal the high energy cost of producing bioethanol on an industrial scale. It is worth comparing biofuel with with the natural gas and crude oil markets. Available technologies for processing ethanol and other biomasses are far from perfect. Nevertheless, Brasilia and New Delhi are not even discussing political programmes to make the most of their shared control of the majority of world sugar production. Incentives to articulate biofuel with sugar production did not even enter the BRIC agenda.

The gas reserves near the pre-salt layer should spur continental cooperation. Interests in Brasilia, if conjoined with those in capitals enriched with oil and gas, like La Paz, Quito and Caracas, should facilitate the opening up of the South American continent to further cooperation with the other BRIC members.

Bolivian gas extracted near Santa Cruz de la Sierra, travels 3.150 km until it arrives in Brazilian households. On route it passes through Puerto Juarez, crosses the Chaco and the Bolivian Pantanal. It arrives at the Brazilian frontier town of Corumbá, along the river Paraguai. Before arriving in São Paulo, it passes through 135 municipalities of various federal states. It could be considered the little brother of the Russian pipeline that unites Siberia with the European Union, since it is the largest in South America and, after Itaipu, Brazil’s most costly investment in energy. The price paid for the gas transported through it, set below international averages since its inauguration in the late 90s, has led to vigorous criticisms from various sectors of Bolivian public opinion.

Gas pollution is practically 25% lower than petroleum CO2 emissions and 50% lower than the coal fog that darkens cities and lungs, especially in China and Russia. The deficiency in energy supplies animated BRIC members to bet on “blue fuel” as a solution to problems. However, they seem to have forgotten the challenges posed by ethnic rivalries, nationalism and, above all, the problems of poverty that compose the geography criss-crossed by gasoducts.

Constituted of methane, ethane, propane and refrigerated at extremely low temperatures, after condensation it becomes liquefied natural gas. In the same manner by which technology allowed these achievements in gas distribution, other equally impressive achievements can be reached. An economy that is based on a variety of energy sources while respecting environmental security surely will widen the options in relation to the equally necessary energy security of the BRICs. In this context, the People’s Republic of China and India invest heavily in collective transport. Why should railway options not be reconsidered in Brazil, if they can substitute heavily polluting planes, buses and trucks, as they already have in China, Russia and India? In terms of technological advancement, Russia, the most prepared, will readily assist the eventual marriage of gas with the still idealised synthetic bioethanol.

There are strong arguments in favour of including “Biojet fuel”, invented by the Russian scientist Ilva Moiseiev, among the list of bioenergy sources. Remember that since the beginning of World War II there were signs of energy exhaustion. In the USSR, USA, Germany, Great Britain, and Japan there were many proposals to produce synthetic liquid fuels on the basis of natural gas. However, these innovations, argue pessimists, are insufficient to deter devastation. If entrepreneurs are not conscious of the risks of planting sugarcane and corn for biofuel, on lands where basic foodstuff was grown, that is another issue altogether.

The rationality of gas exploration should allow Russia to address the needs of its shared present with China. Indirectly, it would mitigate the side effects of scarcity, preventing sugarcane plantations, which originally came from India, from taking over traditional agricultural areas in the South Asian subcontinent, as has already occurred in Brazil.

The tradition of environmental policies reveals misapprehensions and the lack of political will to be an environmental power. This worries the advocates of subsistence farming and of forest protection.

Separated from energy priorities, environmental policies provoke impediments to cooperation between Brazil and the other BRICs. After almost half a century of stagnation in food prices, even before the current world crisis, skyrocketing oil prices led to more expensive fertilizers. These impacts on the price of subsistence prevent Food Security from assuming the leverage that it needs to correct the imbalance between global demand and supply that no member of BRIC is able to address.

THE PRESENCE OF BRICS IN NORTH AMAZONIA

The converge of interests between Brazil and the U.S. facilitated by sugar/ethanol industrialists disappointed those who desired a rapprochement with the US that could supplant Brazil's current position of mere exporter of primary goods. Abrupt oscillations in prices and environmental irresponsibilities in the production of bioenergy, certainly make those who fear future scarcity uneasy. Unfortunately, when the short blanket of national environmental policies covers the head it uncovers the feet.

The expansion of sugarcane plantations in the Brazilian states of São Paulo, Mato Grosso, Pará and others serves the global consumer market of bioethanol. Especially in the Amazonian countries that have a sugarmaking tradition, such as Guyana or Surinam, the announced revival of ethanol is resuscitating the latifundium sugarcane plantation model.

With its annual production of billions of litres of alcohol, the plummeting prices of bioethanol and oil, caused by the world financial crisis, were a vicious blow to the 357 alcohol plants functioning in Brazil. Dozens of these plants might have to scrap their expansion plans due to the crisis. This draws attention to the bagasse that is used as fuel for thermoelectric plants, almost exclusively during the harvest period. Harvesting coincides with the dry season, during which low precipitation reduces the water intake and output of hydroelectric dams. Therefore, this apparent advantage of sugarcane plantation actually means that energy security is a hostage to the mood of sugar industrialists.

Colombian production, almost 50 times smaller than the Brazilian counterpart, is based on sugarcane and palm oil with technology that is imported from one of the BRIC members, India. As if this were not enough, Brazil missed the chance to sell its technological know-how to Guyana, where the Chinese adapt their knowledge of bioethanol production extracted from sweet sorghum.

Many forget that commercial, political and religious interests have transformed North Amazonia into a centre of BRIC interests. Russia sells armaments to Venezuela and promotes joint military exercises. Even the military base on the beautiful Caribbean island of Orchila, Caracas offered for Russian bomber aircraft. In Guyana and Surinam significant portions of the population adopt Hinduism or Islamism as their faith and have close ties with India. This group controls the vital sectors of the national economy of these two distant neighbours.

Forgetful of the historical social crises that originate in sugarcane plantations, whether the Government wants it or not, every plantation involves these risks. The productivity of monocultures depends on fiscal incentives, climate, soil, the health of plants, absence of natural plagues, water, the genetic amelioration of crops and even on the choice of varieties adapted to the climate.

Clean energy and alternative systems based on gas, wind, compressed air, and the sun, are all viable. But in regards to alcohol, its overproduction, precisely when new phases of the global crisis appear, risks creating new constraints and abrupt oscillations in prices. Nonetheless, new plantations appear in Colombia and Guyana, two neighbours afflicted by terrestrial and maritime border disputes with Venezuela and Surinam, importers of weapons from all BRIC countries.

Petroleum in deep waters does not excite either Bogotá or Caracas to make concessions to solve the contentious affairs of ongoing areas of litigation. Even after renovating the Bolivarian Armed Forces, nationalist politicians and military men in Venezuela put on hold the historical will to reincorporate significant portions of Guyanese territory. Prudently, they remember what Saddam Hussein went through for his frustrated attempt to reconquer Kuwait, historically a part of the Baghdad Caliphate. Caracas is categorical in refusing to accept the principle of mobile borders, relatively common in Europe, especially between Germany, Poland and Russia. For the time being, its silence and prudence are worth gold.

THE PROBLEM OF LEATHER AND FOOTWEAR AMONG THE BRIC MEMBERS

The dependence of Chinese footwear industries on Brazilian leather is impressive. The largest producer of bovine meat in the World, in this regard Brazil resembles an elephant chained to a small

and fragile pole. It accepts this situation because it does not realise its actual strength.

In the market of pirate countries acquiescent of contraband, the value of leather for the cattle rancher is greater than bovine beef. During the various phases operated by tanneries various elements are extracted from the epithelial tissue for the production of gelatins, organic composts, fat for soap and animal feed. In 2006, leather refuse was sold for approximately US$60/ton in the slaughterhouses of Mato Grosso do Sul state. Even hairs are extracted from bovine ears for the production of high-quality brushes in Asia.

Brazil and Argentina reserve the grim monopoly of the smelly and polluting phase of leather manufacturing, standardized wet-blue processing. Calcium sulphate to depilate, chrome oxide, tannins and colouring for completion, thousands of litres of water and energy to improve the texture, elasticity, durability and size are employed in the tanning process with heavy environmental externalities. After desiccation, still colourless, without the oil and sandpaper polishing of later stages, the leather is packaged and disappears in globalised networks of piracy. In Brazil, the whole piece is sold for around US$25, the price of a cheap pair of shoes! That is if it is without holes caused by insects and their larvae, cinder marks or rips left by barbed wire.

Approximately ten million cattle supply large and small slaughterhouses and freezing works each semester. Scattered across the arid hinterlands known as the Sertão, near cities or highways, the abattoirs, whether official or irregular, sell off a significant portion of their leather production to the black markets. Those who investigate this commerce do not even find receipts or registers, uncommon paperwork in most abattoirs. Thus the impossibility of presenting exact statistics.

Meat as well, most of it in retail commerce, proceeds from irregular sources. In regards to leather, total silence dominates the relevant authorities. Nobody says where it goes. If surveillance is not exercised to regulate the meat that citizens put in their mouths, with even lower probabilities will there be control of the leather used to fabricate the shoes they wear!

The disparate quantities of chromite that are imported, especially from Argentina, of salts, tannins and other chemicals utilized by tanners unveil the imbalance between the volume of manufactured leather and domestic consumption or legal exportation! The vulnerabilities of export and consumption statistics expose the tip of the iceberg of transgressions peculiar to the tanning economy. The Federal Revenue of Brazil, a specialist in emptying the pockets of real estate owners, dentists, doctors, farmers and other professionals, never imposed a real impediment to the tax evasion inherent to the millionaire businesses that deal leather, wood, gold, precious stones etc. There is not one prison sentence in Brazil applied to a baron of the leather black market.

The importation of Chinese or Italian handbags and shoes manufactured with the epithelial tissue of Brazilian cattle ruins national industries, and increasing the tax rates of these products does not solve the problem because of the immense quantities that are dumped in the black markets.

The largest exporter of the BRIC group, China, which is known as the factory of the world, produces 90% of footwear imported by Brazil. Data provided by the Chamber of Commerce reveals that, in the first five months of 2005, 6.6 million pairs of shoes arrived illegally. This unfair competition with the national footwear industry unemploys thousands of labourers and technicians. In this context, the deliberations about raising Mercosur's, the Common Market of the South, Common External Tariff are hilarious. China has already reached the pole position replacing Brazilian products that have high added value, in Argentina, Uruguay and Paraguay, for its own. Other solutions are not viable because the simplistic judicial perspective on the parallel economy disallows them. Fraud in this sector benefits hands in the revenue bureaucracy. Thanks to corruption, the illegal commerce of leather in conjunction with other networks of contraventions ricochets onto legal business.

In China, the contrabandists that damage the popular economy receive the death penalty. According to tradition, family members pay for the bullet that was used in the execution. The illegal commerce of electronic products and money laundering end up helping the leather smugglers, who involve more and more people as they widen the range of illegal activities they engage in. That is one of the reasons leather contraband has expanded so much. Even chemical product and drug trafficking, among others, are reinforced in this context. Those who buy leather for the black market recently incorporated the caprine economy of the Sertão into this vast network that goes from the Amazonian areas of Maranhão to the arid regions of Minas Gerais.

The clandestine leather economy grew with the voluminous increase in international demand. Its price rose in the black market and the illegal commerce gradually spread and intermingled with networks in Taipei, Hong Kong, Shanghai, Macau and Shenzhen.

Given the importance of leather to various industries, first and foremost footwear, supplying this product involves a constellation of suppliers who are bribed into deviance by international entrepreneurs eager to meet Chinese, South Korean and Vietnamese demands. Therefore the diversity of stringent rules that are imposed by certifiers to track the origin of cattle and the beef they provide should equally be applied to the commerce of leather.

Concentrating on articles with very little added value, which do not even merit more than a dollar per kilo, and maintaining a limited export portfolio, leads to the paradox of Brazilian commerce, expensive products are bought and extremely cheap products are sold. The leather that is manufactured abroad returns to the domestic market with added value in various products. For example, shoes and luxury handbags, many of which are counterfeits of famous brands. Mule leather, which is more valuable than the bovine equivalent, if exported, would attend the demand of the pharmacological industry in China.

Three BRIC members fabricated the majority of the fifteen billion pairs of shoes launched annually into the world market. China is responsible for nine; India, one; and Brazil, the world's largest producer of leather, around two hundred and eighty pairs less than Gandhi's land. The formerly powerful national footwear industry today suffers because of competition from contraband.

Data provided by the Brazilian Institute of Geography and Statistics (IBGE) indicates that the total retraction of the national footwear industry in the international market reached almost 4.5 billion dollars in 2006. This has had extremely negative effects on employment in the garment, shoe and leather goods sectors.

THE IMPORTANCE OF INFORMAL ECONOMY BETWEEN BRICS

Brazilian footwear is almost three times more expensive than the "made in China". Manufactured with contraband leather that travels around the world before arriving at the doors of the BRIC member, without this raw material the Middle Kingdom could not be the largest world exporter. The solution to compete is not to overburden workers. If authorities chose to reduce taxes that hinder national industries, the footwear trade in the Middle Kingdom would have no option but to pay market prices for the leather "made in Brazil".

Chinese businessmen, recipients of large quantities of illegal leather, are vulnerable without the primary unprocessed material, even though clandestine trade works perfectly well through the networks of the global market. In the Italian case, Russian mafiosi pass on to their partners Brazilian leather of great quality. They pay and provide incentives for pregnant cows to be slaughtered on the eighth month or a few days before the calf's birth.

The particularly tender and malleable leather of a new born reaches very high prices in the special design shoes, glove making, upholstering, fine clothes and bookbinding markets, usually "made in Italy". The value paid for this epithelial tissue surpasses the price offered for an adult animal with a good amount of meat.

As for the Chinese, thirsty for quantity and speed, to avoid expenses with large stocks, they accept everything that comes from contraband, even refuse that it is masterfully transformed into containers for glasses, cigars, wallets etc. The Russian mafias, important actors in the black markets of the BRICs, possess profound knowledge of the illegal international economy. They pass on Siberian gold and wood and Brazilian leather to China. Paradoxically, Brazilian meat exports that follow the path of legality suffer in the hands of Moscow and Beijing, which impose phytosanitary barriers that depend on the mood of the sanitary policies of their bureaucracies.

In China, the bits of leather that are damaged by larvae are re-utilized in a process named 'stucco' by tanners. This technology, originally developed in Brazil, was illegally appropriated! Even in regions where ticks are abundant because of the disappearance of natural enemies, this technique has never received the attention it deserves by Brazilian tanners.

Ship containers full of leather leave Brazilian ports by a diversity of routes and return full to brim with added value products. In other words, in the world of contraband, inequalities are reproduced independent of any political creed that the receiver country may have. National agribusinesses export weight while our importers buy products that are substantially more valuable.

In the USA, EU and Australia, agriculture and farming benefit from technologies that add quality and value to their exports. Here, on the contrary, there is continuous specialization in the exportation of commodities. This reveals the need for more than the Free Trade Area of the Americas, at one end, and, at the other, the South American Community of Nations, substituted in April 2007 for the Union of South American Nations, UNASUR.

Victims of the closing down of footwear, handbag and jackets industries and of the moribund tradition of quality shoes, thousands of unemployed struggle to make ends meet. Nonetheless, the institutions that were created to fight contraband do so in high heels. Legislation, the referee of the match, determines thus. It never really allowed the complete eradication of the sources that illegally supply the Asians with this raw material. Fraudulently evaded in the leather economies of the Amazon Cooperation Treaty Organisation (ACTO) and Mercosur associates, no word is heard against this leather, the abundance of which occurs due to deforestation for cattle ranching space.

Supplying one out of many emporia of the sino-industrial complex, the parallel market here absorbs a variety of replicas, and the dumping of these counterfeits broke hundreds and hundreds of industries. First, garments, glass frames, footwear, toys, then domestic appliances and, finally, the few that worked with high technology.

Brazil's foreign agenda concentrates on grand projects, such as the G20. It seeks to alter, in favour of the periphery, agricultural commercial negotiations, but it does not combat the forces of contraband networks, which cut at the roots of technology intensive industrial production in Brazil.

The population's low levels of income and the obsession for primary surplus reinforce the option for commodities. Today Brazil is the largest exporter of in natura bovine meat in the world. Businessmen in Russia and European Union countries slyly import and re-export this meat, partly sold as sausages, salamis etc.

Caring about quality, Brazilian, Argentinian and Uruguayan farmers and freezeworkers were excluded from the club that is comprised of a handful of groups who control the world meat market. Things will remain this way until the former start to work together. But this is unlikely to happen because traditionally they fool each other and do not boycott their boycotters. They adopt suicidal postures of misunderstanding fostering destructive competition in this era of globalization in which interest groups define almost everything.

Convergences in the struggle against illegal trade would join efforts so that producers in the region can use their shared force in the niches of international commerce. This would disoblige meat "made in Brazil" from entering Arab and African countries through middlemen. After passing through intermediaries, it would arrive in Egypt, for example, only when signed by traders from the Netherlands or from France, among others.

Comparative advantages exist in favour of the Mercosurian production, such as natural pastures that provide nutrition at low costs. The luminosity and heat facilitate development and rapid fattening. Also, the genetic modifications carried out decades ago by cattle breeders are reflected in the unequalled quality of Brazilian beef, which originated in India and was raised in nature at lower energy costs than the cattle raised with special feed and brutal energy consumption in the European Union or Russia.

A negative factor associated with meat is environmental devastation, which does in fact intimidate. In regards to the salaries of workers, remember, they are minuscule. Comparisons in the international scenario indicate that working in the same roles, with higher or lower profitability, national specialists earn from the freezeworks here significantly less than what is paid to an Irish or American worker. Hygiene certificates, the excellent taste of exported meat and the sophistication of carving do not reduce the incompatibilities of the agribusiness, famous for its genetic ameliorations, and the environment.

CASES OF PIRACY IN CATTLE RAISING

Extensive cattle raising, the jewel of commodity exportation, is victimized by its own productive-environmental carelessness. To compensate for its victimization by cheap exports, agribusiness is served by many nebulous incentives. Providing products of low added value, agriculture and farming contribute only trifles to national economic progress. It will perpetuate an activity that destroys the cerrados, Brazilian savannahs, sertões and tropical forests while corruption is wedded to deforestation acting as a guideline for production in its multiple stages.

Remember, sectoral authorities in the Ministry of Agriculture and the Ministry of Finance naively start to respond to the footwear crisis through the easy way out: raising customs barriers. They thereby satisfy fleeting interests of entrepreneurs and politicians. In a fuss that is amplified by local selfishness, the diplomacies of the Mercosur quadriga foster accusations that the products of one neighbour is destroying the market of another. At this rate, the dreams of integration and of integrating efforts to demobilize international contraband are slowly pushed away. Network structures protect corruption and the monumental profits of leather contraband. They coexist in powerful niches of the informal economy promoting operations throughout Mercosur.

In order to increase joint efforts and mutual respect among the member countries of BRIC, urgency is needed to curb clandestine and dishonest practices of trade between members. This measure would require the footwear giants to declare the origin of the bovine epithelial tissue used in exported products. Shoes, bags, and leather trainers, apart from having its source in cattle that graze in deforested areas, are the result of illegal commercial practices.

If governments have the capacity to track down cattle and its meat from the pastures to the supermarkets, with the genetic technology available it is perfectly possible to confirm the origin of the leather footwear that is "made in China".

The entrepreneurial class of the member societies of the Amazon Cooperation Treaty Organisation (ACTO) and of Mercosur is lacking consciousness of the real dimension of profitability in the contraband of cattle. Including clandestine meat that is available in frontier towns, Brazil participates with approximately a fifth of the product's world commerce. It competes with the U.S. And Australia, both of which had together 30% of the global market until recently.

There is evidence that the formation of bovine gallstones or cholithiasis is related to nutrition. One may presume that it is formed specially in cattle that are raised grazing lands chemically constituted by alkaline soils.

Caused by the precipitation of cholesterol, fatty acids and bile colouring, gallstones are worth more in weight than gold in the abattoir. Size, shape, as well as the ochre hue, which can assume stronger red and sometimes yellow tones, vary a lot. But the secret of their utility is kept under rigorous measures.

The rare gallstones represent with no doubt what cattle have of most value. A good stone can pay for various cattle. In value it loses only to diamond and apitoxina. In the slaughterhouses, piercing the gall bladder makes the liquid ooze through a sieve. If present, the calculus is retained in a sort of winnow inside a sealed or locked safe box. In large refrigerators, closed-circuit television survey the whole process. As in any mine, those who work with gems are subject to meticulous screening and inspection.

After opening the box and carefully collecting its content, which is enveloped in cotton as a preciosity, these calculi of the size of a grain of cereal or even of a bird egg enter into the millionaire businesses of the Amazon and elsewhere. These illegal goods are smuggled out of the country by the hands of groups from Barretos in south-east Brazil and Campo Grande in the central-west region. Clandestine slaughterhouses that beef up old cows most often extract gallstones that are exchanged for trinkets and gifts.

Compared to the frequency with which they occur in humans, finding calculi in cattle is quite rare. This fortune produced in Argentina, Brazil, the U.S. and other countries with large herds, is the most cherished facet of bovine piracy. They leave illegally with guaranteed receivers in China, Japan, Switzerland and Germany. Again, it is worth gold.

In Brazil and Argentina, the two main contraband sources of this product, the animal inspection and sanitary surveillance services ignore the losses derived from such neglect. The information collected by the author, in spite of being disjointed, suggests that the bilestones are used in advanced centres of pharmacological technology. In ancient Japan, they were part of the composition of fine ink and paint. Today, its use in certain phases of opotherapy serves to prepare medication. There is still uncertainty over whether the product is also anti-carcinogenic or a sexual stimulant.

INFORMAL ECONOMY AS A THREAT ON THE BRIC ROUTE

Contraband and the clandestine economy entail dangers that are rarely perceived, which might end up souring relations between BRICs. The Amazonian via crucis, with plenty of stages, impels us to remember the destructive cases of fungi that destroyed the homogeneously planted Hevea brasiliensis, in Fordlândia. Also the fungi that annihilated Gmaline arborea, imported from Asia to fill the gap in the supply of fibres for papermaking, left bankrupt the millionaire Jarí project. After the mites found in Chilean fruits and the scare provoked by the Black Sigatoka disease, the fungus that spread through the crates used to transport the most appreciated banana, Musa sapientium, who knows if the Acacia magiuns currently being planted by the Swiss in vast extensions of land in northern Amazonia will endure? Who may guarantee that the wood wasp, Asian soybean rust or beetles will not attack countries that import wood and other Amazonian products illegally? How can we be sure that the golden mussel, an oriental plague that puts hydroelectric turbines at risk, will not cause further damage to Amazonian power plants?

Another misfortune, the plague called the Collapse of Colonies Disorder will certainly wreak havoc. Caused by the single diet that agricultural monocultures force upon swarms or by insecticides that affect the immunological systems of bees, this infirmity decimates them. In addition, a collection of super-resistant bacteria has appeared as the result of pollution from rural toxins, fertilizers and machinery. This collection of practices puts at risk bee hives worldwide.

Insects pollinate 70% of plants. The reduction of their population threatens orcharding and various cereals. The Collapse of Colonies jeopardized the production of honey and of apitoxines in China. In Brazil, African and European bees, which are more resistant than their native stingless counterparts, slowly diminish almost unperceived.

The problem of environmental security between the BRICs suggest the urgent need to implement risk prevention policies. Despite only being manifest sporadically, various plagues are reflect anthropic imbalances. It is impossible to predict until when sugar cane and soybean plantations in Brazil and India will survive unscathed by the fungi attacks. Therefore it is worth noting how the BRIC countries will prepare themselves against the new bioterrorism threats. It is known that plagues developed in labs to destroy coca leaf plantations in Colombia tragically also eliminated Corn crops in Ecuador. Even when faced with these massive risks, there are not enough joint initiatives to force international sanitary defence and for intelligence services that can prevent and demobilize this type of terrorism.

Remember, the soybeans used for human nutrition appear in a variety of products. They are also employed by other industrial sectors, such as manufacturing glycerine, lubricants, paint etc.

When these facts are unknown to ill-informed innocence, one might be led to think that the fast food hamburger boycott might deter importation of soybeans and meat produced in the Brazilian Amazon. In other words, soya, a grain with multiple utilities, is part of the composition of a variety of foodstuffs. European society imports it and consumes it while at the same time cursing the devastation that follows its cultivation. As for ethanol, an equally cynical picture appears. Its lobby endowed it with prestige supported by

environmental arguments of dubious honesty and even gave it fame for contributing to the reduction of global warming.

BRAZIL, THE AGRICULTURAL POWER OF THE BRICS

Earmarked as the agricultural power of the BRICs, Brazil must measure more carefully the ecological costs of this mission. For its adequate performance, it counts with a series of public policies. It also depends on the research infrastructure, appendix of the articulation between the state and multinational corporations that produce inputs.

Brazilian soybean productivity is unmatched. This is partly due to the efforts of the Brazilian Agricultural Research Corporation, Embrapa, however it is necessary to recognize that the sustainability of this process accumulates indelible environmental damage. Current sugar cane production perhaps entails even more severe harm. These products attend to ample interests within and without Brazil. The multiplicity of ramifications of the industrial sector in relation to soybeans and sugar cane creates conveniences between national and foreign capital. Thus, the national colours that are forcefully attached to the bioenergetic and nutrition complex which surrounds these monocultures is of little actual relevance.

Soybean milling, always in the hands of a reduced number of multinationals such as Anderson Clayton, Unilever, Ralston Purina, Continental Grain, was one of the lucrative stages of the productive cycle, even if dominated by oligopolies. Now all of these, in addition to Ethanol Pacific, Cargill and Monsanto, diversify their investments with an eye on the markets of the Berlin-Beijing axis. A large portion of this milling is currently processed in China. That is, the centre eats the meat and the periphery gnaws on the bone of celebrity for planting these commodities and thus becoming an environmental bandit!

Research incentives, credit to produce and harvest, the construction and maintenance of transport infrastructure, the eventual pegging of minimum prices and other insurances in Brazil are practically all left to the state to care for. Abroad, on the other hand, oligopolies and markets dictate the rules, happy with the hedonism of equating citizenship with being a consumer.

Producing the maximum amount possible with first generation technology, without worrying about environmental damage even on paper, seems to be the philosophy of entrepreneurial action stimulated by the ignorance of not respecting the constant signals that relate to the threats of climate change. In regards to the mitigation of climate change, the BRIC quadriga does not have much strength to move the chariot of its own responsibilities. Remember, technological packages and the strengthening of the Brazilian system of rural extension, which aimed at modernization, capacity building and higher levels of productivity, were state created instruments. If they had not been installed it is unlikely that the latifundium monocultures would be disseminated in such a technical manner. The state positioned itself as the true sponsor of the soya boom, and equally of ethanol and cattle raising. As is well known, these products are witnesses of the modernity that invests so much in technology to give birth to primary products without added value!

The government should realise that the indebted farmer full of obligations can hardly wait. The smaller producer who has a hard time with bare necessities, deserves support to sell the fruits of his labour, especially so as to widen the bottleneck of social inclusion. If the state wants to derail the machine of environmental devastation it must take significant measures: provide capital directly to the crop producer during the right period to buy at reasonable prices; multiply caution so as to never commercialize products grown on slash-and-burn or invaded lands. Guarantee warehouses for maintaining stocks and the means for the products to reach consumers are available, as well as forming strategic reserves against speculation and minimising human suffering due to natural disasters.

Soyabean is considered by agribusiness good business and this will continue, as has been argued, even with the arrival of an alternative initially more attractive such as sugar cane for bioethanol. Due to the structural incentives that support its growth, soybeans, whether they cause much or little degradation of cerrados and forests, is a vital product protected by the international market. While supply is maintained, importers will never cease to buy Brazilian soybeans. If they do, they risk going hungry.

The fact that the prices of soya are associated with the dollar obliges producers to live with the oscillations of the currency. Cultivated for exportation, this cereal refuses to be a protein alternative for the poor classes. However, if this grain stubbornly attracts the interest of exporters, its cultivation hardly would lose space to other products with significant economic cycles such as sugar cane, cattle raising, coffee, all in vogue since the slave-based history of the nation. The capitalist mode of accumulation inherent to the dependent socio-economic formation will prevent the cannibalism of monocultures throughout Brazil's interior.

The Mercosurian soybeans anticipated by a few years the expansive demands of consumption led by the People's Republic of China, with approximately a fifth of all mouths to feed on this planet. This led to increasing demand, and consequently the strength of agribusiness

ECONOMIC INTERDEPENDENCE AMONG BRICS

Nutrition is responsible for a significant portion of the expenses of popular classes. The rise in the prices of provisions speeds up disillusionment with politicians in power, and the Russians know very well what this means. In the European Union, for example, seasonal products are consumed all year round. Produce and fruits receive more incentives than cereals. On the other hand, countries that lag behind, technological advancements of the monoculture latifundium destroy smaller scale family production.

Every now and again the price of soya falls and later regains its rising tendencies. But not all economies are fit to deal with these oscillations. The limited success of oleaginous cultivations in Russia, for example, forced Moscow to be one of the main importers. Some European farmers are substituting the hard to buy and progressively scarce ground fish for soybeans. The diminishing harvests in the U.S. and China's huge importing behaviour, all these factors stimulate demand for this grain.

Among the opportunistic costs that follow the fluctuations of soybean prices, the worst of them appears in the hiking prices of input resources, which include agricultural machinery, calcarium and fertilizers. This does not even take into consideration the speculation that is rampant from the equipment industries to commercialization abroad. Exporter countries, including Brazil, Argentina and Paraguay never united in selling soya to become more competitive in the world market. Oligopolies strive to make sure that in the context of scarcity this grain does not become a weapon in the hands of Mercosur countries.

In relation to sugar cane, in the 1970s, one hectare could produce around 3,000 litres of ethanol. Due to genetic modifications and the number of varieties adapted to specific regions, including the Amazon, its productivity grew threefold in the last thirty years. Extremely productive and rich in saccharose transgenic species developed in Brazil could be studied in comparison to the species planted in India. It is necessary to associate the successful expansion of sugar cane cultivation in Brazil with the high prices of sugar caused by unsuccessful harvests in India, more evidence that the BRIC members have great influence on the world market of this product.

As to smuggling of genetic material scrounged from forests, it portrays the vulnerability of the state with no capacity to react. In the U.S., the EU and China, hundreds and hundreds of biotechnology companies study genetic material from tropical forests. But how many Brazilian scientists are active in this area, for example, in Manaus' Industrial Hub?

The almost non-existent perception of internal and external threats prevents Amazonian diplomacies from engaging in united action to avoid climate risks, a future source of international conflicts. The General Secretary of the Amazon Cooperation Treaty Organisation gave an example of habitual indulgence when it left to GTZ, the German donator, the costs of forest protection projects, which could have been paid for by the eight ACTO members.

Of secondary importance to the chancelleries that are obliged to support it, the Amazon Cooperation Treaty Organisation formed a pool of institutional partnerships with international entities which rarely show any signs of BRIC influences. Benefiting from partnerships with the OTCA, which tends to engage in long periods of acephalous operation, European groups put forward projects in areas well served with fresh water sources that they intend to transform into environmental reserves, ecological corridors or homologate as indigenous territory. Governments, such as those in Bolivia, Ecuador, and Venezuela believe this will tie down the hands of Amazonian countries. They claim these measures will force them to renounce various of their own projects putting at risk sovereignty. The traditional hydroelectric plants, various of which have Russian built turbines, and transport integration projects would be particularly affected.

In fact, dams are the starting point for various arguments that illuminate deficiencies in the use of hydraulic resources. One rarely reads that, despite its amazing hydrographic basins that count among the largest on the planet, Brazil possesses only 594 dams out of the 45,000 built worldwide. Only 1% of this total amount is found on Brazilian territory. In the People's Republic of China they correspond to 45%, a total of 22.000. After the U.S., that accounts for 14% of the total, or 2,675, 9% are in India, 6% in Japan, 3% in Spain and 2% in Canada. France, which has a much smaller territory, almost reaches Brazil in terms of the amount of dams in its territory. These statistics presented by Caubet, and taken from studies by the International Commission of Large Dams (ICOLD), consider only those that are built along a course of water with a minimum height of fifteen meters counting from the lowest point of the foundations.

PRECIOUS STONES AND GOLD CONTRABAND BETWEEN BRICS

In a country that is a source of unequalled gemological wealth, exporting precious stones never really resulted in prosperity or brought with it significant quantities of foreign currency. Remembering the old Pluriannual Plan for the Development of the Mineral Sector of the National Department of Mineral Production, there were 2,000 businesses dealing with stoning and 5,000 jewellery makers employing around 50,000 people in the biennium 1994-1995. One decade later, these numbers shrank significantly. Regardless of

DNPM's diagnostic, it is known today that almost 95% of Brazilian gems are exported in their brute form, and almost all of them leave the country through the open doors of contraband to India and China.

Due to excessive taxation imposed on the jewellery industry, the blunders of the Federal Reserve, and fiscal persecution of legal commercialization brute gem exports were dynamized. Stoning technology in Brazilian industries became obsolete given abandonment. Thousands of technicians and specialists were laid off.

The low immunity to banditism contributes to criminalize the gold and diamond economies in Russia and Brazil. Now that the infrastructure of the sectors that used to export with added value has been destroyed, India and China transformed into recipients of brute precious stones and metals. Gold and gemstone smuggling is one of the strong links in the networks of organized crime. The evasion of gems that follows the gold route has found new paths in the world of business.

Rare precious stones and minerals are not only of interest to stone cutters, jewellers and collectors. Black turmaline, for example, given its diffractive properties is used to coat objects that must be invisible to radars. Solar irradiation collectors in spacecrafts made out of saphires, silicium and diamonds, as well as alloys fabricated with tantalum withstand great attrition without disintegrating. That is why they are used to incrust missiles, satellites, spacecraft etc. Titanium is used in dentistry, and crystals in the military industries.

Growth in the industrial use of gold and diamonds has encouraged India and China to have buyers in various mines in Brazil, Colombia, Surinam, Bolivia, Peru, Ecuador, Venezuela, and Guyana, in other words, in all Amazonian countries with no exceptions. Brazil, in the 1980s, occupied the first place in the rank of countries that most produced gold for contraband. It transformed Uruguay, which has not one mine in its territory, into the main exporter in Latin America.

Today, national production loses to South Africa, U.S.A., Australia, China, Russia, Uzbekistan, Peru, Colombia, and various others. Reserves were claimed to be found 54% in Minas Gerais, 27% in Pará, 6% in Mato Grosso, 5% in Goiás, 4% in Bahia and 2% in Maranhão. But the statistics do not even refer to the states of Tocantins, Amazonas, Roraima, Rondônia and Paraná where gold and diamonds satiate contraband's hunger. As usual, commercialization is coupled with corruption. Official gold production in 1996 in Brazil reached 60 tons and the country spent a much larger amount importing products that contained gold. For example, industrial chemical compounds, from Japan and Germany.

Central countries re-export gold with added value without even having mines in their own territories. Even India takes part in this party at our expense. Dealing precious stones, mafias established in Kolkata, Madras and Mumbai smuggle emeralds, saphires and aquamarines, among others. Particularly attracted by diamonds and Colombian emeralds, mafia networks are witness to this, in the Amazonian countries organized crime acts as if those were no man lands. Thanks to smuggled gems, Indians and Chinese fabricate jewellery of great refinement. Political will is lacking to stop contraband and invest in the jewellery industry. In the banking sectors, negotiations are made with diamonds and gold from globalized contraband sources in pathways filled with illicit services.

To exemplify how much civil irresponsibility impedes good results in organized crime busting, in the region known as the dog head, a triple border between Colombia, Venezuela and Brazil, for many years there have been discussion about drug, weapons and chemical deposits. In the fluvial basin of the region, there are rumours of growing and formidable schemes to stock illicit products. There are other routes, such as Iquitos to Manaus and then Belém. The Macapá routes follow on to the Oiapoque, benefiting from the colonial status of French Guyana. From there, without customs barriers, the cocaine, biopiracy and gold networks reach Europe with little effort. Through Cayenne and Paramaribo, ecstasy arrives from Europe and Chinese electronic products, regardless of whether there is a bridge over the Oiapoque connecting French Guyana to Amapá in Brazil.

Tied down by its former colonial bonds with the Netherlands or not, contraventions in Surinam are characterised by a form of realism that agglutinates circumstances in its favour. There demands multiply for Brazilian precious stones and diamonds by Asian nationals, from, for example, Thailand, China, Singapore; and of course one must not forget Colombian emeralds, the commerce of which not even the feared Revolutionary Armed Forces of Colombia (FARC) have managed to impose taxes on even after four decades of existence.

Since the dawn of the 21st century, transnational contraband networks in Brazil have been perfected and articulated with counterparts in the Caribbean neighbours of Guyana and Surinam. Piracy strategies demand planning and no improvisation. That is why the apprehension of wood and leather shipments at the loading and unloading ports is only sporadic. Efficient control by customs is almost impossible. Even in the most controlled ports such as Rotterdam, inspection does not reach even five percent of the total.

The ant strategy, silently initiated by Russian and Chinese mafiosi, much more professional that their African and Latin American counterparts, has allowed the entrance of heroin for decades. In Brazil they found out this scheme only recently and by chance. Drugs and smuggling mortify the "social tissue" of any state. Even the less numerous Africans in the Amazonian world enter as couriers in the drug trade. Mafias in Gabon, Senegal, Angola and Congo, regardless of the cyclical crises of primary products, also carry

cocaine, the only genuinely Amazonian product with high added value, for re-exportation.

THE INTERNATIONALIZATION OF CONTRABAND NETWORKS

Selling cocaine in quantities above fifty kilos is considered a risky operation because apprehension would be very costly. The relatively easy tactic of camouflaging with agricultural products, for example, in coffee sacks, granted this option many years of prosperity in Colombia, Brazil and other places. Since it became a routine practice there are more obstacles now. The same applies to mixtures of drugs with the cocoa that supplies chocolate factories in Switzerland and Belgium, which in the past rendered great profits to criminals.

There are better caches than frozen chicken, fruit crates, electric appliances, tractor wheels, tender parts of bovine beef, prawns, cans of sweets or seafood etc. For example, in the never discussed contraband of green granite from Bahia, only god knows how much cocaine has been transported inside the slabs. The same must be said about the leather that leaves the country illegally towards China, Russia, Italy and other places.

Granite from Espírito Santo, the brown with blue shades and the black and blue of Ji-Paraná in Rondônia, where Brazil divides its borders with Bolivia, is rarely exported already cut and polished. In the brute granite businesses one can sense the hidden hands of Italian-Asian mafias. In the Verona Fair, an excellent place to measure power, national businesses fail to add value in the exportation of Brazilian granite. Instead of cut and polished, the black market requires selling large blocks, ideal caches for cocaine. These arrangements, utilized successfully in the past, occasionally re-edited at present, become more common in rapid and flexible triangular operations.

The post-9/11 reinforcements of surveillance have forced organized crime to resort to old schemes to solve new problems. This is done through the internationalization of contraband networks. In the profoundly global dynamics of illicit products and practices, the cognitive notion of crime is going through profound recycling, which is necessary to maintain the vigour of mafias that are still not challenged by the cooperative action of BRIC police forces and goverments.

Smugglers that are protected by the tribalization of of crime know that police intelligence is distracted by pursuing sardines instead of sharks. In the light of this reality, old folklores are resuscitated in all corners. Given the efficiency of contraband networks, in relation to both what enters and what leaves, parallel commerce is full of dynamism.

The interests of the kingpins of electronic products, emeralds, gold and noble wood smuggling have for years strolled together with those of the drug trafficking barons. They benefit from the absence of any efficient juridical instruments that might challenge crime in any of the BRIC countries.

FARC attempted to secure their economic sustainability by turning to the kidnapping industry. In the past, this would help them to buy provisions, medications, uniforms, whether in Brazil, China or wherever necessary. Guerrillas are not alone in engineering a provocative anti-system apparatus in borders and transnational social spaces. The parallel integration of Colombian and Indian mafias, the mega businesses of gold and emerald contraband, is running at full speed.

Exploiting as much as they can of local mineral wealth, Surinamese politicians forget just as the Brazilians do as well, forget that mineral resources only allow one harvest. The alternatives found, such as sugar cane, banana, prawn breeding, even if signaling a diversification of employment and of the export agenda suffer due to lack of incentives. Local elites› attention is almost entirely focused on mining oligopolies and the clandestine economy. Surinamese dollars are exchanged for investments wherever it may seem appropriate. These financial operations are tied to the capital that mining and contraband deposit in the hands of very few. This includes the gold that is found by thousands of Brazilian pauper miners.

The People›s Republic of China while investing in mining discretely associates itself with groups of various nationalities: in manner similar to Scandinavians and Canadians who prefer to conceal their presence in this branch of activity that so detested by environmentalists. Chinese and Indians now occupy spaces that where formerly monopolized by Europeans and North-Americans. In regards to Indian influence, whether in Guyana or Surinam, it follows the footsteps of Chinese descendants in local commerce. The shrewdness of Hindus in the contraband of precious stones, especially those that are illegally extracted from Brazil and scattered around the world through the windows of contravention.

A few years ago ‹China Zhong Heng Tai Invesment›, with technology that resembles too much of what is recommended by Embrapa in terms of the selection of seeds, spacing, fertilization and the treatment of saplings, established with Paramaribo a partnership to plant oil palm trees. With a budget of 116 million, this activity employs around one thousand Chinese technicians. Regarded to be a bioenergy initiative, it will one way or another increase Surinam›s foreign reserves. Despite Embrapa›s worldwide recognition for its tradition in this sector, Brazilian absence is striking. Policies that articulate sectoral and regional production with the neighbourhood are lacking.

Since there is no internal investment in aggregating knowledge and innovation, technical cooperation, which demands science and

technology, is castrated. It is sad that Brazil has Embrapa, whose technological advancements impress the other BRIC members, and yet it can not cash in on this scientific progress. While coming up with cutting-edge agricultural technology, perhaps the most advanced in the world, paradoxically Brazil sells grains, the result of this technology, without any added value.

CONCLUSION

Brazil, the first letter of the acronym, by its very nature launched to the condition of environmental power, is in the throes of becoming also an agroexporting power. Despite the great technological, geographical, cultural and economic distances between the BRIC members, they have to keep together in this quadriga to draw the world chariot. But if Brazil, the only member of the Far West, for instance leaves, the BRICs would become RICs. Second, Russia is the largest world provider of gas and petroleum, with a technological and cultural estate that is enviable. Third, India, the most stable democracy in the periphery, is achieving scientific leaps that impress the community of nations. Finally, China, with its five thousand years of continuous history, today regarded as the factory of the world, sells to whoever wants to buy cheap manufactured products of both low and high quality. However, this BRIC quadriga, promising to propel the world chariot, still does not have a project for political cooperation and mutual aid.

At the moment it is an informal group in which each member strives for its own interests, but if the BRICs do not devise cooperative political plans to mitigate climate change, demobilize contraband and fight organized crime, protect natural resources (that do not provide two harvests), and a cultural policy that can allow their populations to get to know each other, it will become little more than an adornment of the international community. Unfortunately these projects are not even discussed at the negotiation table.

The increasingly visible presence of Russian-Venezuelan cooperation, the interests of India in Guyana and Surinam, and the force of China's businesses have already dislodged the United States from the throne of primary commercial partner in the eight Amazonian members of ACTO. This reminds us that BRICs must become a political priority and not mental magic.

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BRIC IN THE CONTEXT OF THE SOUTH-SOUTH COOPERATION: A BRAZILIAN PERSPECTIVE

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Given the importance that Brazil attaches to its role as an emerging economy, as a global trader and a recognized regional leader in world affairs, the study of a material texture of the increasing bilateral and multilateral relations within BRIC, and in the sphere of South-South cooperation as a whole, shows a cue to a growing gap between a post-colonial southern perspective of the developing world and a neo-global outlook on the South-South factor in world affairs. Recent changes in trade and financial flows in the context of the South-South cooperation make BRIC and other major players in the South, responsible for the restructuring of trade patterns and bilateral and multilateral ties within the southern cooperation model. At the same time, the BRIC countries regional roles also seem to grow at the expense of minor trade and economic partners in their respective regions and also at large. So the future of BRIC will depend not only on their capacities to build durable and expanding commercial and financial nets with the West, but also upon its regional organizing efforts in trade and integration policies and upon their global trade and finance structure building capacities with the emphasis on the South-South factor.

INTRODUCTION

Is Brazil a country of the South or of the North? What does it mean to be one of the BRICs? Does it cease to be a Southern country, quitting the world of the poor and joining the one of the rich? Can we say that the BRICs are a Southern phenomenon? What I mean by putting these questions is that if Brazil is no more a developing country, that is has once been, but a developed one, it still has in its political and economic inheritance some definitive features of a Third World posture which make it remember and value its pedigree now that striving for less poverty, more economic prosperity and more equality is the main legend of the post-Cold War and globalized world.

There are two different manners to contemplate the South-South relations. The first one has to do with the post-colonial phase, when the Third World countries coalition, the G-77, made of the developing countries, interacted with the West in the context of the North-South relations. In the 60s Brazil was one of the distinguished players of the G-77, whereas in the 70s the G-77 played a vociferous role when representing the "coalition of the weak". Differently from the Non-Aligned movement, this Third World coalition managed to organize and sustainably lead a collective action of very distinct countries at the periphery of the world production, finance and trade versus the power of decision of the rich and developed nations.

The second manner is of a recent vintage and is relevant at the present moment when the South-South relations are acquiring a bigger role in world affairs. A post-Cold War world is a more coherent and homogeneous environment from the point of view of production,

economy, trade and finance structures, though the world distribution of wealth is very unequal and may be growing more so.

On the one side, the South is more stratified than before, divided into various groups: emerging countries, NICs, developing countries and less developed countries, which creates a centrifugal momentum of growing distances among old supporters of a post-colonial anti-western solidarity. What it means is that it is partially integrating into the North, partially remaining a part of itself and partially losing its vigor in a desperate fight against malnutrition, misery, HIV/AIDS epidemics, armed conflicts and natural disasters. All this explains a gradual weakness and a diminishing role of the G-77 and of the Non-Aligned movement at the world scene. As Susan Strange wrote in 1992, "The so-called Third World no longer exists as a coalition of developing countries ranged, as in UNCTAD (the UN Conference on Trade and Development), in opposition to the rich countries. Developing countries are now acutely aware that they are competing against each other, the laggards desperately trying to catch up with the successful newly industrialized countries"[1].

On the other side, the South is freer than it has been before to choose allies and partners without any ideological or cultural repentance for its political, economic and even strategic choices. It feels not only freer but also compelled to make partners exempt of a neocolonial drive and without an imperialist past or a hegemonic present. It explains the emergence of such multilateral bodies, with the participation of Brazil, as IBSA (India, Brazil, South Africa), the G-5 (Brazil, China, India, Mexico and South Africa), the commercial G-20, BRICs and financial G-20, and some newly denominated groups2, all of them with a clear Southern identity, that is, with a relative degree of a new South solidarity with the like. What is alluring in this process is that it does not resemble the old ideological confrontation but has a look of a businesslike cooperation, occuring as a gravitation process around the great emerging economic and trade Southern actors as China, Brazil, India, South Africa and Mexico, including some newly industrialized countries (South Korea) and some major Asian, African and Latin American economies (Indonesia, Philippines, Thailand, Egypt, Nigeria, Argentina, Chile).

This newly acquired Southern countries behavior is characterized by unstable and rapid coupling/ decoupling/ recoupling3 and by group integration / disintegration, which nevertheless has some durable features: a) a need to protect its members from globalized threats and challenges; b) an interest to create lucrative and spotlike negotiation positions in a new geo-economic environment with better chances of success; c) a desire to soften critical impacts of the international environment (like the recent world financial crisis); d) a belief that Southern-Southern cooperation could be void of the yoke of the past hegemonic practices.

In this sense the BRICs pose as emerging newcomers in a world order that brings to evidence new structures composed of emerging powers ready to replace the old Western powers. The significance of the BRICs from this point of view is that the power resources accumulated by this group of countries are being transformed into results making real that the South as a whole is not only recovering from the colonial past and the recent neocolonial practices but also the role of the BRICs appears to be increasing in comparison with the leading Western economies e trading monopolies.

Why is it interesting to speak about the BRICs as a Southern phenomenon, despite the fact that one of its components is Russia, a country with a great power and even a superpower record? First of all, Russia is a new country on the international scene that never existed as a state in this design before. In spite of being a successor state to the Soviet Union, it is a product of a post-imperial disintegration, which may be compared as a whole, and very hypothetically though, with the decolonization processes of the British and the French colonial empires. Secondly, Russia, until recently, was a transitional economy, joining the global market as a recognized market economy only in 2002. Thirdly, a deception with the Western politics, with regard to the NATO expansion to the East and to the European Union's "democratic" enlargement into the Central and Eastern Europe and into the Caucasus as well as other frictions made the Russian politicians, like Evgueny Primakov, propose the Asian (I read the Southern) vector as a balance to the Western blind and indifferent onslaught.

May be, at the times of Putin, Russia has turned more Southern, without losing its European identity, and less Western, not in the sense of its cultural, historical or social experience, but in the sense of a more crude perception of the needs of the South or of the developing world. This may stand as an additional explanation for a larger engagement of Russia, China, India and other Asian countries, in the context which is not overwhelmingly motivated by pure economic interest, but also by some identity engagement which was not wholly anti-Western and was not wholly pro-Western.

In the Brazilian perspective, there are some critical attitudes as to the replacement of traditional South-North stand-off by the South-South expansion. The former Brazilian President Fernando Henrique Cardoso says that "… it would be a strategic mistake to minimize the importance of the alliances inside what it was once called the "First World" and replace them anxiously by the alliances of the "Third

1 STRANGE, Susan. States, firms and diplomacy. *International Affairs*, Vol. 68, No. 1, p. 4.

2 N-11 (or 'Next 11') are Bangladesh, Egypt, Indonesia, Iran, Korea, Mexico, Nigeria, Pakistan, Philippines, Turkey and Vietnam. The Gulf Cooperation Council (GCC) states are Bahrain, Kuwait, Oman, Saudi Arabia and UAE.

3 CHUGH, Lal. Marcoeconomia e Finanças Internacionais. Seminário "INOVATION and Business Trends", 26 e 26 de agosto de 2009. Rio de Janeiro: Brasil Connections, 2009.

World"4. Meanwhile, President Lula's government is striving to see the weight of Southern-Southern trade and cooperation grow more and wider. In the words of Celso Amorim, Brazilian Foreign Minister, it does not mean a replacement of the other vector: "Coming closer to the other developing countries means complementing and enriching the traditional ties with the developed countries, which are prospering"5. From the official point of view, the South-South agenda is not in a conflict with relations of Brazil and the developing countries. Probably, the context and the configuration of these ties are less embracing the old North-South axis and create new mixed and heterogeneous trade and cooperation pools that mitigate the post-colonial ideological context of the phenomena. Multiple economic arrangements, new trade patterns, new alliances mixing the developed and the developing countries and companies offer a fresh glance at the global production, finance, technology and trade structure.

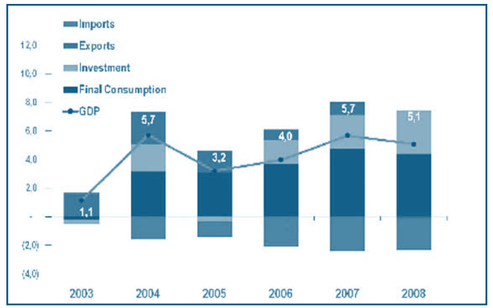
4 CARDOSO, Fernando Henrique. Novas oportunidades. DESAFIOS da Política Externa Brasileira. CEBRI 10 Anos. Dossiê. Volume 1 – Ano 7 – 2008. Rio de Janeiro: CEBRI, 2008, p. 22.

5 AMORIM, Celso. Uma Política do Tamanho do Brasil. Ibid, p. 18.

BRAZIL AND THE CRISIS

Ignoring the present financial crisis the portfolio investment continues to flow to Brazil. In October 2009, the level of Brazilian currency reserves rose to US$ 230 billion, slightly over the amount of its foreign debt. The explanation is found in how Brazil managed to slow down the crisis and to start going out of it. It is mainly by way of massive public and private investments in infrastructure, due to the PAC (Program of Enhancing Growth). The PAC for 2007-2010 is a working instrument of the national infrastructure development, including railway, highway, port, airport and energy projects. It also embraces urban development, housing, social integration and environment. The whole sum of investment must be about R$ 500 billions (c. US$ 280 billions). It is extensive to all the Brazilian regions without exceptions. Hydro power stations, nuclear power stations, sea-floating drilling platforms, oil tankers and oil platform service boats, oil and gas lines, water and sewage systems, among many projects, are being under construction now.

Table 1. Growth led by domestic market: consumption and investment



Source: Central Bank, Brazil

A project of the return of outgoing waters of the San Francisco River is being under conclusion and it will modernize the hydrographic system of North-East states, which suffer from severe draughts. About R$ 40 billions will be spent on technology development and innovation6.

Until quite recently Brazil was a net oil and oil derivatives importer. In 2006 it has achieved self-sufficiency in oil production and started exporting, although insignificantly, raw oil and oil products. In the last two years Brazil made a discovery of huge off-shore oil reserves in Santos and Campos basins, 100 - 150 miles off the coast of the two key Brazilian industrial states – São Paulo and Rio de Janeiro, at 10,000 to 25,000 ft. depth. The so-called "pre-salt" reserves are estimated from 30 to 100 billions barrels and would attract from US$ 100 to 200 billions of investments, beginning already in 2009. The mere fact of having such mega reserves will push Brazil to occupy the 6th place among oil-rich countries. The government started to organize a state company which will explore and commercialize Brazilian oil production from those reserves.

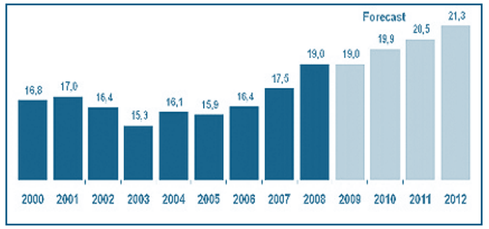
Brazil's banking sector has become much stronger after having been restructured in the wake of the 1999 financial crisis. The capital

6 The need for infrastructure recourse as a token of growth was identified by the Goldman Sachs report "Building the World: Mapping Infrastructure Demand", April 24, 2008, when the PAC was already on its way in Brazil since 2007.

raising activities are very high. Its stock market is characterized by high corporate governance. The Central Bank is independent. The fiscal balance is maintained at the level of +3,5%. The inflation targeting is quite successful and working. Brazil is rich in natural resources which it explores and sells and is a global exporter of commodities. It may be said that Brazil was “prepared” to face the world financial crisis by way of learning lessons of 1999 and making its financial system control speculative money flows. The country has not gone bankrupt nor sought the IMF financial support. It has adequate tools to face the situation. The government is working to minimize the negative effects, promoting domestic demand. The PAC is one of the main anti-crisis tools, while the COPON (Committee of Monetary Policy) is keen on lowering interest rates. There has already been a production recovery in the 1st, 2nd and 3d quarters of 2009, after a slowdown in the last quarter of 2008. Most probably there will be no recession in 2009 and the prospects for 2010 are from 4 to 5% of the GDP growth (Table 1). Brazil is an attractive investment destination because of its economic stability, well-defined legal framework and profitable investment opportunities (Table 2). The foreign direct investments have grown from US$ 12.9 billions in 2003 to US$ 45.1 billions in 2008.

Even if the GDP grows slower than predicted, the income inequality is still overwhelming and the education system needs much an improvement, Brazil is a country with an enormous potential of growth, TBTF (too big to fail because its domestic market is huge),

Table 2. Investment Rate – % GDP



Source: IBGE & BNDES/APE

with the power that can achieve and secure tangible economic and technological assets in the next decades. The dormant giant is awakening. The “country of the future”7 is transforming itself into a country of the present.

BRAZIL IN THE SOUTH-SOUTH AND INTRA-BRICS’ TRADE

Why thinking of trade is important? It is because about 30% of global production amounts to trade. From 2001 (China’s joining the WTO) to 2007 the bulk of global trade generated by the developing countries rose from 20% to 40% (See the Chart 3). Of course China was the main trade pusher, together with some other Asian countries like India, South Korea, Malaysia, and Singapore. At the same period the bulk of global trade generated by the developed countries went down at the same proportion (See ANNEX I). So we can speak not only about a substantial Southern trade increase, but probably about the beginning of the movement of the pendulum of the world trade towards the South and into the South.

According the UNCTAD statistics, significant advances were achieved in the export of goods (17.6%) and services (12.9%) by the

7 ZWEIG, Stefan. Brasil, País do futuro. Rio de Janeiro: Ed. Guanabara, 1941.

Chart 3. Bulk of the Global trade in evolution .



Source: Prospects for the Global Economy. The World Bank. Published on June, 10, 2008 http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21604212~pagePK:64257043~piPK:437376~theSitePK:4607,00.html

developing countries only in 2006. In 2005, the intraregional trade rose to two thirds of the total trade of the European Union, to 26% of the trade of the Association of Southeast Asian Nations (ASEAN), to 13% for the Southern Common Market (MERCOSUR) and 9% for the Economic Community of West African States (ECOWAS). The South-South trade is increasing, mainly owing to flows to or from Asia, and particularly among Asian countries.

The boom in exports to Asia is taking place particularly in the context of trade among the countries of the region, that accounted for 53% of exports to Asia in 2005 as compared with 41% in 1995; the African and American continents account for only 2% of the Asian market (1% in 1995), essentially owing to trade in commodities.

In 2005, the foreign exchange reserves of developing countries could finance eight months of their imports, as compared to five months 30 years earlier. The current account balance of the balance of payments of Asian developing countries has been positive. With a 5.2% annual average increase in per capita GDP in real terms from 2000 to 2006, Asia stands out clearly from other developing countries (4.0%) and the world (1.8%)[8].

A comparison in terms of power and profit of the biggest world corporation of the BRICs countries the dynamics of the economic growth of these futures world economic leaders. According to the Fortune Magazine statistics, China is leading the BRICs in the ranking of the 500 global corporations, in numbers as well as in profits in the most modern sectors of its economy, 37 Chinese companies making part of the world ranking, among oil production and refinery, banks, telecommunications, construction, mining and transports[9].

8 THE PLACE OF THE DEVELOPING COUNTRIES IN GLOBALIZATION: UNCTAD PRESENTS THE LATEST FIGURES. NCTAD/PRESS/PR/2007/018.rev1, 12/07/07.

9 Due to lack of space, only seven of the major 37 Chinese corporations, responsible for more than one third of the Chinese GDP, are shown in the Table 5.

Table 5. (Table 5 accounts for four tables respectively (China, Russia, India, Brazil)

Country Rank	Company	Global 500 rank	Revenues ($ millions)	City
1	Sinopec	9	207,814	Beijing
2	China National Petroleum	13	181,123	Beijing
3	State Grid	15	164,136	Beijing
4	Industrial & Commercial Bank of China	92	70,568	Beijing
5	China Mobile Communications	99	65,015	Beijing
6	China Construction Bank	125	57,977	Beijing
.....				
37	Aluminum Corp. of China	499	18,579	Beijing

See Fortune Global 500 : Countries http://money.cnn.com/magazines/fortune/global500/2009/countries/ Access on Nov.20, 2009. Table 5 accounts for four tables respectively (China, Russia, India, Brazil)

China is followed by Russia, India and Brazil. Russia is represented by its eight major companies:

Country Rank	Company	Global 500 rank	Revenues ($ millions)
1	Gazprom	22	141,455
2	Lukoil	65	86,340
3	Rosneft Oil	158	46,985
4	TNK-BP Holding	234	34,668
5	Sberbank	310	28,309
6	SeverStal	409	22,393
7	Surgutneftegas	420	21,976
8	Evraz Group	454	20,380

India has seven global corporations among the great 500.

Country Rank	Company	Global 500 rank	Revenues ($ millions)	City
1	Indian Oil	105	62,993	New Delhi
2	Tata Steel	258	32,018	Mumbai
3	Reliance Industries	264	31,792	Mumbai
4	Bharat Petroleum	289	29,989	Mumbai
5	Hindustan Petroleum	311	28,247	Mumbai
6	State Bank of India	363	24,578	Mumbai
7	Oil & Natural Gas	402	22,725	Dehradun

Brazil has six major corporations in the 500 list.

Country Rank	Company	Global 500 rank	Revenues ($ millions)	City
1	Petrobras	34	118,257	Rio de Janeiro
2	Banco Bradesco	148	50,930	Osasco
3	Itaúsa-Investimentos Itaú	149	50,216	São Paulo
4	Banco do Brasil1	174	43,984	Brasília
5	CVRD	205	37,426	Rio de Janeiro
6	Metalúrgica Gerdau	400	22,860	Porto Alegre

If we compare the state of the 500 global corporations between 2005 and 2009 we will see that the number of the major Western corporations among the 500 is diminishing:

Table 6. How the Countries Stack Up (2005)

Country	Number of Global 500 Companies
U.S.	140
Japan	68
France	40

See Fortune Global 500 : Countries
http://money.cnn.com/magazines/fortune/global500/2005/countries/ Access on Nov.20, 2009

Table 7. Rank of Global 500 Companies (2009)

Country	Number of Global 500 Companies
U.S.	176
Japan	81
France	39

See Fortune Global 500 : Countries
http://money.cnn.com/magazines/fortune/global500/2005/countries/ Access on Nov.20, 2009

At the same span of time the number of the BRICs' global corporations more than doubled between 2005 and 2009.

Table 8. BRICs' global corporations rise

Country	Number of Global 500 Companies (2005)	Number of Global 500 Companies (2009)
Brazil	3	6
Russia	3	7
India	5	7
China	16	37
Total	27	57

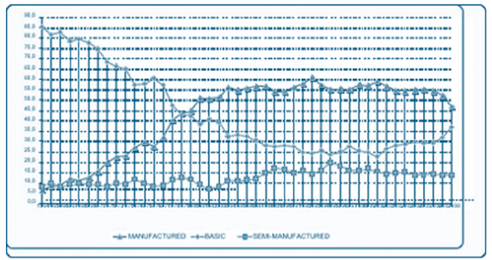
Judging by these and by the previous data, there may be perceived two trends in evolution: a contraction of western economies and an expansion of the southern economies, from the beginning of the first decade of the years 2000. Of course, any conclusions must be weighed with accuracy, due to the harsh world financial crisis of 2008, which affected western economies more deeply than southern countries. Nevertheless, there was an increase in the number of global corporation in the NICs, such as South Korea (from 11 to 14), remaining at the same level in Thailand and Singapore, as well as in the Latin American countries like Mexico (from 2 to 4), in Venezuela (from 0 to 1).

The Brazilian foreign trade maintained its strong growth trend in 2008, reaching the unprecedented figure of US$ 371.1 billon in its flow, an increase by 32% over the year 2007, when US$ 281.3 were traded. Compared with the year 2003 the trade more than doubled. In the last two months of the year 2008, the trade flow of exports and imports showed a decrease when compared to the expansion verified until October 2008, which was due to the world financial crisis, that lead to a reduction on international prices of mineral and agricultural commodities and on demand for goods. During the year of 2008, exports reached US$ 197.9 billion, and imports were US$ 173.2 billion, both peak marks. Considering 2007, exports grew by 23.2% and imports grew by 43.6%.These figures clearly show the increasing liberalization of the Brazilian economy and its openness to the world trade. The trade surplus reached US$ 24.7 billions in

2008, a lower value than the one registered in 2007, of US$ 40.0 billon, due to a surplus of imports against imports and in virtue of the appreciation of the national currency and the growth of Brazilian economy.

Exports of all products categories, including basic, semi-manufactured and manufactured goods, registered record levels for yearly periods. Compared to 2007, the exports of basic goods increased by 41.5%, semi-manufactured goods exports were 24.2% higher and the exports of manufactured goods grew 10.4%. It's worthwhile pointing out that industrialized goods represented 60.5% of the exports composition[10].

Chart 2. Brazilian Exports by category



Source: SECEX/MDIC

10 Balança Comercial Brasileira. Dados Consolidados. Brasília: MDIC, 2008, p.1.

From the Brazilian perspective, the South-South bulk of trade, composed mainly of the Brazil – Asia trade, has recently overcome the Brazil – Europe and the Brazil – United States trade, putting them respectively on the 2nd and 3d places. It is quite clear that the Brazil - BRICs trade is making a huge part of the Brazil – Asia trade (if we also sum up the Brazilian – Russian trade). The Brazilian-Asian trade rose from US$ 26.8 billions in 2004 to US$ 84.6 billions in 2008. China, Japan, South Korea and India are among the principal suppliers.

Brazil exported to 26 Asian countries the amount of 18.9% of all the Brazilian exports and Asia was the main supplier of products and services to Brazil (27,2% of Brazilian exports). For the first time in the history of the Brazilian trade the Asian imports surpassed the European Union imports (2 place), Latin American and Caribbean imports (3d place), the United States (4th place). The Asian share in Brazilian exports to Asia is 43.8% to China and 16.4% to Japan. In 2008 The Brazilian-Chinese volume of trade totaled US$ 36.4 billions or more than 40% rise as compared to 2007. The Brazilian-Japanese amount of trade amounted to US$ 13 billions, or a third more than a year before. The Brazil – South Korea trade was US$ 5.4 billions, with the variations from 33.7% increase in 2004/2005 to 7.3% increase in 2006/2007. Between 2004 and 2008 the Brazilian – Indian trade grew from slightly more than one billion to US$ 4.66 billions, the Brazilian –Singapore trade increased from one billion to US$ 3.84 billions, the Brazilian – Hong Kong trade rose from US$ 951 millions to US$ 2.59 billions and there was a growth of Brazilian-Taiwan trade from US$ 1.8 billion to US$ 5 billions[11].

The Brazilian exports destinations in 2008 by country were as follows: 1) the US (US$ 27.6 billions), 2) Argentine (US$ 17.6 billions), 3) China (US$ 16.4 billions), 4) Netherlands (US$ 10.5 billions), 5) Germany (US$ 8.9 billions), 6) Japan (US$ 6.1 billions), 10) Russia (US$ 4.6 billions), 40) India (US$ 1.1 billions).

The Brazilian imports in 2008 by country were the following: 1) the US (US$ 25.8 bi), 2) China (US$ 20.0 bi), 3) Argentina (US$ 13.3 bi), 4) Germany (US$ 12.0 bi), 5) Japan (US$ 6.9 bi), 6) Nigeria (US$ 6.7 bi), because of net oil imports, 11) India (US$ 3.6 bi) and 13) Russia (US$ 3.3 bi).

In January-July of 2009 the world financial crisis caused a reduction of world trade demand. The Brazilian exports were reduced by 22.8% and imports were cut by 29.5% in the first and second quarters of the year. The whole volume of trade decreased by 25.9%, while the trade surplus went up by 23.8% as compared to the same period of 2008.

As far as the destination markets are concerned, there was an increase of exports to Asia (+15,8%), with an emphasis on China

11 SÍNTESE da economia brasileira – 2009. Rio de Janeiro: CNC, 2009.

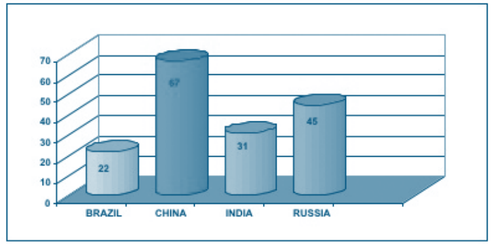
(+42,3%), with stable trade with African and the Middle East countries. While the other regions have shown significant reductions: United States (-43.3%), Latin America and Caribbean (-37.3%) and the European Union (-27.2%).

In 2009 for the first time, China, one of the BRICs, came to the first position among Brazilian exports destination (US$ 10,5 bi), followed by the US (US$ 7,2 bi), Argentina (US$ 4,9 bi), Netherlands (US$ 3,9 bi) and Germany (US$ 2,7 bi). Russia was the 13th buyer and India the 18th. The warmer demand was produced by Asian economies which favored primary products imports from Brazil, amounting to 60% for this region.

In 2009 Asia maintained itself as the principal supplier with 27.7% , followed by the European Union (23%), Latin America and Caribbean (17.9%) and U.S.A. (17.5%). Among supplier, the U.S.A. took the first position (US$ 9.7 bi), China the second (US$ 6.8 bi), Argentina the 3d (US$ 5.0 bi), Germany – the 4th (US$ 4.3 bi) and Japan – the 5th (US$ 2.6 bi). India was at the 14th place among suppliers and Russia – on the 32nd).

Analyzing Brazil in the context of the BRICs, from the point of view of the rate of openness of economy Brazil and India showed lesser percentages (22% and 31%), than China and Russia (67% and 45%).

Chart 3. BRICs foreign trade / GDP (%) - 2007

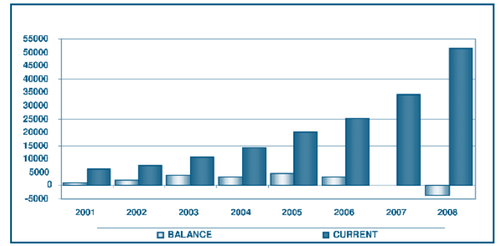


Source: FMI

When looked upon the BRICs from the point of view of exports evolution, it is evident that they expanded heavily, from 6.9% share of global trade in 1997 to 15.4% share in 2008, that is, they have grown 8.5%. China alone responded for more than 50% of the increase (5.6%). Russia grew 2% and India and Brazil 0.5% and 0.4% respectively.

If the Brazilian global trade volume expanded rapidly between 2001 and 2008 by 226%, its volume of trade with the BRICs had a spectacular growth, increasing by 715%. Only exports share with RICs pulled from 6% share in 2001 to 14% share in 2008. While this intra-BRICs trade had surplus until 2007 for Brazil, in 2008 it showed a small deficit of about R$ 3.8 bi.

Chart 4 - Brazil - RICs Trade



Source: FMI

The Brazilian-Chinese trade rose spectacularly by 1,030% between 2001 and 2008. The Brazilian exports to China grew from 3.3% to 6.4% at the same period and Brazilian imports from China increased from 2.4% to 10.5%.

The Brazilian – Indian trade expanded 464% between 2001 and 2008. After a period of balance until 2005, the bilateral trade showed a deficit to Brazil. While Indian products exports to Brazil increased from 0.98% to 2.06%, Brazilian goods increased insignificantly on the Indian market (from 0.49% to 0.56%).

The volume of the Brazilian-Russian trade grew 410% between 2001 and 2008 with a Brazilian trade surplus during all the period. The Russian participation in Brazilian exports grew from 1.9% in 2001 to 2.4% in 2008, Russian imports varied from 0.9% to 1.8% at the same time.

Looking at the BRICs from the point of view of intra-BRICs trade, the most dynamic among the BRICs countries was China. Considering the whole volume of trade among the BRICs, the Chinese market absorbed in 2008 68.6% of Brazilian exports, 72.5% of Russian exports and 58.4 of Indian exports. But the country which has the biggest share of trade with the RICs compared to the general volume of its foreign trade is Brazil, that is 12.1% of its exports is directed to the BRICs and 16% of its imports come from the BRICs. Whereas for China the trade with the BRICs is of least importance – 6.5% of exports and 4.5% of imports.

Analyzing the exports from the point of view of aggregate value, among the BRICs, Brazil has the most balanced foreign trade, with 30% of agricultural goods, 20% of mineral resources and 47% of manufactured goods. China exports highly technological products (93%), followed by India with 64% of industrialized goods in exports and by Russia with high concentration on mineral resources in exports (73%).

When imports come to be analyzed, the profiles of China and Brazil are very much alike: 71% of imports are manufactured, 23% / 22% are minerals and 6% / 7% are agricultural products. India, on the contrary, depends more on the imports of minerals (40%), manufactured goods (46%) and on only 4% on agricultural products. Russian imports are 83% manufactured goods, 12% are agricultural products and 4% are minerals.

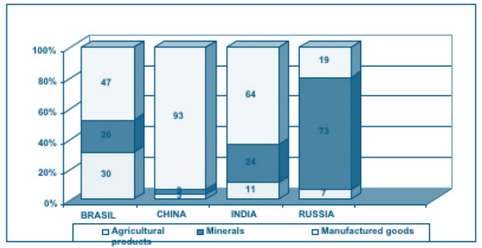
It must be said that there is a high degree of complementary trade and cooperation among the four BRICs economies. China is a big supplier of manufactured goods, especially industrial components, textile products, shoes, toys, computers and machine tools. India is specializing in services and technology, with the emphasis on engineering, chemistry, refining, software and pharmaceutics, also entering new grounds as steelworks and car production. Russia, in

Chart 5 - Intra e Extra-Regional Trade - BRICS

US$ millions	Brazil		Russia		India		China	
	Value	Part. %	Value	Part. %	Value	Part. %	Value	Part. %
Exports								
Countries Total	197.942	100,0	367.573	100,0	178.034	100,0	1.428.869	100,0
Brics	23.913	12,1	28.112	7,6	16.982	9,5	93.164	6.5
Others	174.029	87,9	339.461	92.4	161.052	90,5	1.335.705	93.5
Imports								
Countries Total	173.107	100,0	255.574	100,0	292.848	100,0	1.131.469	100,0
Brics	27.710	16,0	38.951	15.2	39.222	13,4	51.172	4.5
Others	145.397	84,0	216.622	84.8	253.626	86,6	1.080.297	95.5

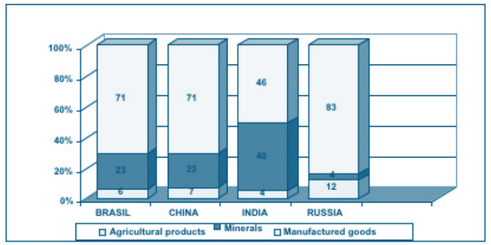
Source: SECEX/MDIC e GTIS

Chart 6 – Exports by aggregate value - 2007



Source: WTO

Chart 7 – Imports by aggregate value



Source: WTO

the wake of the Soviet Union disintegration, is leading as a world supplier of energy resources (oil and gas) and of minerals. But it should be stressed that its potential is much more diversified with emphasis on scientific research, outer space exploration, and nuclear energy usage. Brazil has a much diversified trade base and is highly competitive in agriculture and mining, with promising project of offshore oil production and alternative energy products as ethanol. The country is a global supplier of food to many countries of the world, including the BRICs, especially China and India12.

REGIONAL INTEGRATION ACTIVITIES

When we mention a positive role of Brazil in the South-South cooperation, we should understand why and how Brazil assumes this role and what it does to strengthen its profile and boost its image in order to interact and to lead a significant regional share of its participants. In a global South equation, the "theory of coalitions" works in two directions: as a liberal-institutional "rationale", resulting in convergence of interests and negotiating positions in international trade, and as strategic-ideological "rationale" which creates a security perspective13. The example of a successful South-South cooperation is the Doha round, where the Southern coalitions played a decisive role. In these coalitions there was a centrality of leadership exercised by southern regional powers as Brazil and India and by some intermediate countries.

That means that in the BRICs case, a regional leadership is essential in order to give more authority in negotiating among the BRICs countries and with the Southern and the developed coutries alike. In a Brazilian perspective, the partnership of the MERCOSUR is important, but not sufficient as a platform for the global economic and financial governance with the active participation of Brazil. So the meaning of its regional politics is understood as building new roles and new behaviors on a regional scale as well as strengthening bilateral ties with its neighbors.

Some example of its new behavior date back to 2000 when the IIRSA (The Initiative for the Integration of Regional Infrastructure in South America) was launched, embracing Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Surinam, Uruguay and Venezuela. In December of 2004 the Third South American Summit which produced the Cuzco Declaration created

12 FARIA, Fabio Martins. Paper presented at the International Conference "Brazil – India – South Africa. Building new strategic identities". Rio de Janeiro, June, 23, 2009.

13 OLIVEIRA, Amâncio Jorge Nunes de, ONUKI, Janina, OLIVEIRA, Emmanuel de. Coalizões Sul-Sul e multilateralismo: países intermediários e o caso IBAS, pp. 160-161. In: BRASIL, Índia e África do Sul: desafios e oportunidade para novas parcerias. Maria Regina Soares de Lima e Monica Hirst (orgs.). São Paulo: Paz e Terra, 2009

the Community of Nations of South America (UNASUR), including 12 countries. In 2008-2009 a South American Council on Defense was negotiated and created. Together with a constitution, a parliament and a South American bank, the UNASUR would stand as an important post-Cold War integrated structure, whose purposes are not the same as those of the OAS or of Rio de Janeiro Treaty. Neither they are narrowly commercial and economic as those of MERCOSUR. Its essence and scope work for a creation of a new durable coalition, which may be useful for facing new challenges and threats, for dealing with distress situations which do not result from regional activities, but issue from a more globalized context. In the words of Nelson Jobim, Brazilian Defense Minister, a "concept of South America" was created and a "regional consensus" is being in ways of formation14. So the UNASUR will stand against threats and will face challenges which were not hindered by the Cold War structures, but are perceived as threats to the sovereignty and to a freer foreign policy behavior.

All of this is very different from what we knew since the end of the Cold War time and even since the beginning of the years 2000. A South American perspective is neither pan-american nor anti-western "rationale". Its identity, which has a Southern look, has been created through amalgamating various political attitudes and preferences, among them some strongly left, such as the Venezuela Bolivarian thinking, Bolivia and Equador domestic and foreign policies and political changes in Argentina and Uruguai. Without doubt, a stronger and more cooperative South American continent will be a step forward to a new role in a world governance which favours new active regional actors, among them Brazil as an outstanding regional leader.

While a security behavior of coalition building is embedded in the UNASUR, a commercial and economic integration in South America, or the first "rationale" of coalitions, is paving its way through conflicts of interests and weighing the correctness of political behavior of some of its actor. It means the Mercosur, but it also means the Pacto Andino. With the countries of Mercosur, the trade doubled or tripled between 2004 and 2008. The same occurred with the Mercosur associate members, as Chile and Venezuela, the latter now finalizing its integration into Mercosur. That is how bilateral and multilateral negotiations are conducted, whether they aim at measuring a democratic index of the Venezuelan domestic policy as a cause to accept or to reject Venezuela's Mercosur partnership or at investigating the pros and contras of property nationalization in Bolivia or a breach of contracts for hydropower station construction in Equador. In all these cases the theme of trade is important and Brazil does not leave any stone unturned to clear the way to an increase of the South American trade, as a base and a guarantee of a stronger South American role.

14 From Nelson Jobin's speech at the opening of the First South American Meeting on Strategic Studies, on the 10th of November, 2009, at the Escola Superior de Guerra, Rio de Janeiro, Brazil.

CONCLUSION

Brazil's regional role is growing through the expansion of continental trade, internal infrastructure build-up, strengthening of regional integration and of political cooperation in South America. These developments will depend not only on its capacity to build durable and expanding commercial and financial nets with the regional partners but also on maintaining and promoting its ties with the Western countries. Traditionally Brazil views the West as an ally and is viewed by Western countries as a partner capable to stabilize unbalances created by virtues of internal political changes in Southern and Central American countries, of border disputes or of civil strife. Brazil is a natural and quite consensual candidate to a permanent seat at the UN Security Council, if its reform is to take place, and has received a considerable western (and not only western) support in its plea for this new role.

Nevertheless Brazil's global profile, be it in trade or in international politics, is fostered more substantially by an increase in the South-South economic cooperation and by the ventures in new international political coalitions, with a considerable emphasis on the intra-BRICs cooperation, as a part of these. Because in terms of its home politics and of political philosophy and in view of the history of its economic development, which reflects its colonial past, Brazil is closer to Southern perceptions of how the world economy should develop and how wealth should be distributed among countries. Most probably, a Southern perspective would give better chances to Brazil's aspirations to meet challenges of a new world order as a recognized regional leader and as one of great powers of the post Cold War world.

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World trade	Year	Latest data
Commercial service exports (current US$)	2007	3,368,897,916,188
Commercial service imports (current US$)	2007	3,072,353,819,525
Manufactures exports (% of merchandise exports)	2007	71.9
Manufactures imports (% of merchandise imports)	2007	69.2
Trade (% of GDP)	2006	56.8
Merchandise exports (current US$)	2007	14,000,602,638,025
Merchandise imports (current US$)	2007	14,179,453,830,026

ANNEX I

Euro area trade	Year	Latest data
Commercial service exports (current US$)	2007	1,089,693,900,978
Commercial service imports (current US$)	2007	997,017,270,563
Manufactures exports (% of merchandise exports)	2007	78.4
Manufactures imports (% of merchandise imports)	2007	68.6
Trade (% of GDP)	2007	80.1
Merchandise exports (current US$)	2007	4,169,743,885,770
Merchandise imports (current US$)	2007	4,093,888,400,520

East Ásia – Pacific Trade	Year	Latest data
Commercial service exports (current US$)	2007	212,645,753,843
Commercial service imports (current US$)	2007	239,633,321,643
Manufactures exports (% of merchandise exports)	2007	77.2
Manufactures imports (% of merchandise imports)	2007	66.6
Trade (% of GDP)	2007	88.6
Merchandise exports (current US$)	2007	1,785,091,060,720
Merchandise imports (current US$)	2007	1,478,040,713,028

Latin Amercian and Carrebean trade	Year	Latest data
Commercial service exports (current US$)	2007	94,041,464,845
Commercial service imports (current US$)	2007	116,771,935,662
Manufactures exports (% of merchandise exports)	2007	54.3
Manufactures imports (% of merchandise imports)	2007	72.5
Trade (% of GDP)	2007	46.8
Merchandise exports (current US$)	2007	753,819,351,785
Merchandise imports (current US$)	2007	735,029,217,718

TECHNOLOGICAL INNOVATION AND ECONOMIC DEVELOPMENT IN BRAZIL

ANDRÉ DE MELLO E SOUZA

Brazil

1- INTRODUCTION

Technological innovation constitutes an essential feature of economic development. Especially since the first industrial revolution that began in the later half of the 18th century, such innovation has represented a crucial component of capitalist entrepreneurship; one that is essentially intangible and goes beyond the mere accumulation of physical and human capital. However, the so-called "knowledge economy" that characterizes our time has arguably made technology more decisive to the competitiveness and dynamism of firms and industries than ever before. Since the seventies, there was a significant escalation of research and development (R&D) investments relative to investments in physical capital. In addition, information and communication technologies revolutionized the production and dissemination of knowledge in the late 20th century. Finally, new international trade regimes were created to protect intellectual property globally, the most important of which is based on the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

Accordingly, modern theories of economic development have created new concepts to try to account for the observed effects on total output growth which are not caused by the growth of inputs, but primarily by technological innovation. Most notably, Joseph Schumpeter (1942) used the concept of "creative destruction" to describe the process of transformation that accompanies radical innovation. In Schumpeter's vision of capitalism, innovation brought about by entrepreneurship constituted the force that sustained long-term economic growth, even as it destroyed the value of established companies that enjoyed some degree of monopoly power.

More recently, the residual concept of "total factor productivity" has been used to measure growth that is not explained by the accumulation of the traditional factors of production. In fact, total factor productivity is often seen as the primary driver of growth within national economies, and may respond for up to 60 percent of such growth, as was the case in some Asian countries (Bende–Nabende, Ford, Sen and Slater, 2002). Technological innovation not only increases the productivity of factors but also generates product differentiation, new products and services, and new or improved production processes.

Similarly, recent trade theories find that "modern endowments", a concept that comprises knowledge as well as human capital, functional institutions and public infrastructure, explain as much, if not more, of the comparative advantages of countries and their evolution over time as traditional factor endowments such as land, labor, and physical capital. Finally, the very concept of "dynamic comparative advantages" suggests that patterns of international trade are not fixed; and that countries can gain efficiency in the production of certain goods and begin to export them. A major

source of new comparative advantages is Technological innovation; and currently 60 percent of international trade involves technology-intensive goods (De Negri, 2005: 85).

While innovation has historically and for the most part taken place in developed countries, a few developing countries have succeeded in dominating the markets of certain technology-intensive industrial niches. Most notably, Japan was the forerunner in the technological catching-up process, followed by South Korea. More recently, the so-called BRICs have also begun to play a more prominent role in the global trade and production of high value-added products. India, for instance, has become a global provider of information technologies and is also competitive in the pharmaceutical sector; while Brazil is a major aircraft exporter and has potential to become the world's most important supplier of biofuels.

To be sure, late developers face considerable challenges in acquiring, learning and applying technological innovations. These include weak financial markets and limited credit, inefficient regulatory institutions and insufficient funds for R&D promotion, higher costs of reproducing innovations as result of the global protection of intellectual property rights, lack of human capital and poor educational systems, and, last but not least, rampant corruption.

But late developers also have advantages, and have often leapfrogged transitional stages of product development by adopting more advanced technologies. For example, China has adopted Automatic Teller Machine (ATM) cards directly, bypassing the checkbook stage[1]. ATM technology has compensated for the deficiencies of its banking and legal systems, which could have hardly supported the widespread use of checkbooks. Another example which applies to all the BRICs is mobile phones reaching higher levels of consumption than conventional landlines. As shown in Table 1, there are nowadays more handsets than wired phones in these countries, a direct result of late development.

As the largest and fastest-growing developing economies, the BRICs are considered as having great technological and economic potential. Their fast adaptation to new information and communication technologies (see Table 1) as well as the impressive expansion in R&D spending per capita and relative to GDP observed in these countries since the later half of the 90s bear testimony to their increasing importance as both a source and a destination of knowledge-intensive goods and services. R&D spending relative to GDP has grown most dramatically in China (0.6 to 1.5 percent) from 1996 to 2007, but in all BRIC except for India it exceeds 1 percent. Per capita R&D expenditures have doubled in Brazil, increased 2.5 times in Russia, tripled in India and increased over eight times in China (see Table 2).

1 In the global ATM market China ranks third in terms of market scale, trailing the United States and Japan (Research in China, 2009).

Firms from BRIC-countries have also carried out significant and increasing R&D investments. Indeed, 21 of such firms are found among the top 1,000 R&D investors in the world (see Table 3). Moreover, the R&D expenditure of these BRIC firms has grown rapidly: over the last four years, they have increased their R&D expenditure on average by 132 percent in Brazil, 95 percent in Russia, 43 percent in India and 59 percent in China. In contrast, the R&D expenditure growth rate of top US and European firms has been 24 and 15 percent respectively (Department for Innovation, Universities & Skills, 2009).

Yet, for this technological potential of the BRICs to be fully realized the implementation of appropriate policies that promote innovation by the state are crucial. In general, innovation can be considered a public good and generates positive externalities which cannot be fully internalized by private firms. In addition, though the private sector leads R&D investments in many advanced industrial economies, in the developing world it almost always lacks adequate resources and incentives to undertake such oftentimes risky and costly investments.

Moreover, insertion in global markets – most notably through trade, foreign direct investments and licensing – is also paramount as a means of improving and accelerating the adoption of technological innovations, which cannot and should not be entirely carried out domestically. The existence of large internal markets in the BRICs and the intense competition for foreign markets should not serve to obscure this as it has in the past.

Finally, though Brazil, Russia, India and China are all populous and territorially large countries which are rich in natural resources, and therefore possess comparative advantages in labor and land-intensive industries, they should not forego opportunities to produce and export technologically-intensive goods.

In a nutshell, while the BRICs have high potential for technological innovation and should not limit themselves to the production and trade of primary goods, the realization of such potential depends largely upon the state policies that they adopt as well as the insertion of their economies into global markets. This paper focuses particularly on technological innovation and its actual and potential effects on Brazilian economic development. Based largely on data and studies performed at the Instituto de Pesquisa Econômica Aplicada (IPEA), the second section presents evidence of the virtuous effects of innovation for Brazilian firms, workers and overall economy. In particular, it shows that innovation promotes employment, higher earnings, wages, job stability, productivity and exports. The third section investigates which firms in Brazil innovate, focusing specifically on their sector and on whether they are national or multinational. It demonstrates that national firms present higher R&D expenditures relative to earnings than multinational firms; and that there is a high degree of sectoral – and even firm – concentration of innovation in the country. The fourth section discusses the role of state policies and institutions in promoting technological innovation

Table 1 - Access to information and Communication Technologies among BRICs

Indicators \ Country	Brazil		Russia		India		China	
	actual	normalized[1]	actual	normalized[1]	actual	normalized[1]	actual	normalized[1]
Total Telephones per 1,000 People, 2004	587,10	5.83	773,10	6,36	84,50	1,74	499,40	5,08
Main telephone Lines per 1,000 People, 2004	230,40	5,76	255,80	6,29	40,70	2,35	241,10	6,06
Mobile Phones per 1,000 People, 2004	356,70	5,38	517,30	6,36	43,80	1,59	258,30	4,39
Computers per 1,000 People, 2004	105,20	5,48	132,20	6,35	12,10	1,75	40,90	3,49
Households with Television (%), 2004	90,00	5,00	98,00	8,56	37,00	2,12	91,00	5,30
Daily Newspaper per 1,000 People, 2000	46,00	4,27	-	-	60,00	4,63	59,00	4.51
International Bandwidth (bits per person), 2004	149,30	5,74	99,90	5,04	11,40	2,52	57,40	4,52
Internet Users per 1000 People, 2004	119,60	5,53	111,20	5,23	32,40	2,50	72,50	4,17
Price Basket for Internet (US$ per month), 2003	28,00	3,79	10,00	9,24	8,70	9,39	10,10	9,17
Availability of e-Goverment Services (1-7), 2006	4,51	7,64	2,57	2,27	3,55	5,82	3,96	6,64
Extent of Business Internet Use (1-7), 2006	5,00	8,00	4,10	6,26	4,60	7,22	3,50	3,48
ICT Expenditure as % of GDP, 2005	7,82	7,70	3,58	1,62	5,91	4,73	5,28	3,51

1) First, countries are ranked in order from "best" to "worst" using their actual scores on each variable. Then, their scores are normalized on scale of 0 to 10 against all countries.
Source: The World Bank

Table 2 - R&D Expenditures among BRICs

R&D expenditures as percentages of GDP

Country / Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Brazil	0,0715079	...	...	...	0.938709	0.963033	0.907552	0.884927	0,830184	0,968866	1,023205	...
Russia	0,965928	1,043744	0.953837	0.996237	1.04984	1,179642	1,246526	1,282636	1,149923	1,067194	1,074431	1,124914
India	0,646562	0,694842	0,712265	0.73757	0,770521	0.747631	0.733335	0,716142	0,687099	0,80374	0,794577	0,801543
China	0,568273	0,644727	0,65297	0.75705	0,902752	0.950691	1.070031	1,133556	1,229894	1,332461	1,417071	1,486891

R&D expenditures per capita (in PPP$)

Country / Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Brazil	46,36148	...	...	...	66,06979	69,34272	67,2874	66,95759	67,42738	82,43315	92,13794	...
Russia	9,499465	11,86326	12,978	16,2838	21,33411	24,72797	30,67276	36,25233	44,23646	54,15363	65,89534	78,92721
India	7,828555	8,739044	9,448218	10,47331	11,43185	11,75162	11,97018	12,27954	13,38553	17,35152	19,12572	21,28045
China	60,80594	67,86583	59,52823	67,31116	80,01811	96,95978	109,9749	124,7002	123,8112	126,5664	141,8477	165,4949

Source: The World Bank

Table 3 - Countries of Origin for Top 1,000 Firms in R&D Spending

Country / Year	2005	2009
Brazil	3	3
Russia	2	1
India	1	12
China	3	5
Europe*	294	333
United States	423	378

*Excluding Russia
Source: Department for Innovation, Universities & Skills (2009).

in Brazil. While overprotection has largely inhibited innovation until the 1990s, the liberalization of trade and implementation of policies aimed at technological development and productivity growth since then have profoundly transformed the entrepreneurial outlook in Brazilian industry. Yet, R&D spending in Brazil is still relatively small and insufficient.

The fifth section looks particularly at the interplay between the Brazilian educational system and innovation in the private sector. It argues that Brazil has succeeded in developing sophisticated post-graduate programs and research financing mechanisms in a relatively short period of time. The country has thereby occupied higher positions in international rankings of scientific production, based on both the quantity and impact of publications. However, the poor quality of Brazilian elementary education may compromise the entire systems of education and innovation.

Moreover, it is also argued that Brazil's academic achievements are not reflected in indicators of innovation among private firms, and most notably in patent grants. Most strikingly, patents issued in Brazil in areas where the country excels in terms of scientific publications are owned overwhelmingly by non-residents. Furthermore, Brazil has led other BRICs until the mid-nineties in number of patents granted in the US, but fallen far behind them thereafter. While problematic in several respects as an indicator of technological innovation, patents provide a measure of innovation output, and are therefore preferable to other indicators, such as R&D spending, which only measure inputs or innovation efforts.

Finally, the paper concludes by highlighting the importance of technological innovation for economic development in Brazil and offering proposals to overcome the main barriers to such innovation in the country. In particular, policies to encourage more R&D investments – particularly by multinationals but also by the state – should be developed; and further and more developed linkages between university and firm R&D need to be established. This will entail abandoning the previously dominant linear model of innovation and replacing it with a more systemic model. It will also entail changing the structure of incentives facing researchers in the universities.

2- WHY IS INNOVATION IMPORTANT FOR THE DEVELOPMENT OF THE BRAZILIAN ECONOMY?

A comparison of the economic performance of firms with different degrees of innovation helps to explore this question. Recent research based on national databases conducted by IPEA (De Negri, Salerno and Castro, 2005; De Negri and Turchi, 2007; Salerno and Kubota, 2008) has classified Brazilian industrial firms according to three competitive strategies:

1. **Firms that innovate and differentiate products**, that is to say, those whose competitive strategy is based on product innovation and the setting of premium-prices for their products, which exceed the prices of their competitors. Typically, these firms export and present above average R&D expenditures relative to revenue within their industrial sectors;
2. **Firms specialized in standardized products**, which are those that compete through price; have productivity levels similar to those of innovating firms and often also export;
3. **Firms that do not differentiate products and have lower productivity.**

As indicated in Table 4, despite representing only 1.7 percent of a total of 72,005 firms, the firms that innovate and differentiate products account for nearly 26 percent of total earnings and 13.2 percent of the employment of the firms included in the research. Conversely, firms that do not differentiate products and have lower productivity represent over 77 percent of the total of firms, yet they account for only 11.5 percent of the total earnings and 38.2 percent of the employment. Likewise, innovating firms export over five times more than firms that specialize in standardized products. IPEA researchers have also found that Brazilians firms that innovate have 16 percent more chance of exporting and present higher rates

of growth. The productivity per worker of innovators is over seven times superior to that of firms that do not differentiate products. Finally, innovators also pay wages nearly three times as high, employ more educated workers (more than three years difference in average schooling) and offer greater job stability (on average, workers remain employed nearly 20 months longer) than firms that do not innovate.

The observed positive and significant relationship between innovation and wages in Brazil has important policy implications, suggesting that innovation is also important for the attainment of social and human development goals. Crucially, the promotion of innovation may contribute to the reduction of income inequality in the country, which is among the highest in the world.

Yet there are reasons to believe that the widely varying size, efficiency and employee qualification of the firms included in the research also may contribute to the observed wage differentials. For this reason, IPEA researchers have conducted a statistical analysis that controls for the effects of 200 additional relevant variables and thereby attempts to isolate the effects of innovation on wages. They have found that the wage difference between firms that innovate and those that do not, but that are otherwise very similar, is 23 percent (Bahia and Anbache, 2005). The wage premiums in firms that innovate and in those that are specialized in standardized products are 23 and 11 percent respectively (see Table 4).

In short, the available evidence suggests that innovation in Brazil plays an important role in elevating productivity, exports, wages, job stability, demand for skilled workforce, and the overall economic performance of firms. Innovation therefore should constitute a crucial component of state economic policy. Before discussing this policy, however, the next section inquires whether national or foreign firms spend most in R&D in the country, and what the sectoral distribution of such firms is.

3- WHICH FIRMS INNOVATE IN BRAZIL?

The first categorization adopted to answer this question divides firms according to their nationality. While foreign-based multinational firms operating in Brazil invest more in R&D than national firms[2], this comparison can be considered methodologically flawed, given that the former correspond to a relatively small set of firms that are leaders in the country of origin, whereas the latter includes a large number of highly diverse firms. To overcome this problem, an indicator of the “effort” to innovate was developed, calculated

2 For the year 2000, national firms have invested in R&D on average R$ 161,347, compared to R$ 4,997,478 for multinationals. Considering only firms that have innovated, the average for national firms was R$ 527,963,61, compared to R$ 8,079,478 for the multinationals (Salerno and Kubota, 2008: 22).

Table 4 - Characteristics of Brazilian Industrial Firms

Competitive Strategies	Firms that innovate and differenciate products	Firms specialized in standardized products	Firms that do not differentiate and have lower productivity	Total
Number of firms and % of total	1,199 (1.7%)	3	55.495 (77.1%)	72,005
Average earnings in millions of reais (% of total)	135.5 (25.9)	1	1.3 (11.5%)	(100%)
Market share (ratio between earnings of firm and of its sector)	0.02	12	0.00028	
Exports (US$ millions)	11.4	5	0	
Employees (% of total employment)	545.9 (13.2%)	333	34.2 (38.2%)	100
R&D expenditures (% of earnings)	3.06	378	0.39	
Productivity: Value-added by worker in thousands of reais	74.1	44.3	10	
Average monthly wages of employees in reais	1,254.64	749.02	431.15	
Wage premium resulting from the firm's competitive strategy (%)	23	11	0	
Average schooling of employees in years	9.13	7.64	6.89	
Average time of employment in months	54,09	43.90	35,41	

Source: Adapted from De Negri, Salerno and Castro (2005)

by the ratio between the firm's internal R&D expenditures and its earnings or net sales revenues (Salerno and Kubota, 2008: 21-22). After controlling for numerous variables, Araújo (2005) has found that the effort to innovate of national firms has exceeded that of multinationals by 80.8 percent during the period of 1998¬2000. The researcher has also disaggregated national and multinational firms in terms of the previous classification for the purposes of comparing the percentage of their net sales revenues that was invested in R&D. The results shown in Table 5 indicate that both national firms that innovate and those that specialize in standardized products display higher effort to innovate than multinationals; and that national firms that do not differentiate products have the same effort to innovate as the multinationals. Nonetheless, simulations performed by the researcher suggests that national firms increase R&D spending as a response to increases in R&D spending by multinationals in the same sector (Araújo, 2005).

Additional evidence suggests that multinational firms innovate relatively less than national firms and generate fewer positive externalities in Brazil. Most notably, multinationals direct proportionally more of their net sales revenues to acquisitions of R&D (0.21%) and other knowledge (0.80%) from abroad, rather than local spending, than national firms, for which the percentages are respectively 0.14 and 0.26. In addition, 79 percent of multinationals do not innovate and differentiate products (Araújo, 2005). This reflects the fact that most technological innovative activity and effort is still concentrated

Table 5 – Effort to Innovate, National and Multinational Firms in Brazil

Competitive Strategy	Average Effort to Innovate	
	National Firms n=70,421	Multinational Firms n=1,556
Russia	1.84	1
India	0.55	12
China	0.29	5
Europe*	0.75	333

Source: Adapted from Araújo (2005: 140).

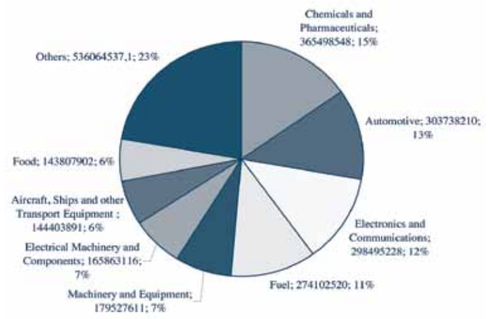
in the firm's headquarters. Subsidiaries that operate in Brazil are oriented towards the domestic market; they typically adapt products or processes developed abroad (De Negri, Salerno and Castro, 2005: 17) and they account for only about 38 percent of the country's exports (Arbix, Salerno and De Negri, 2005). The most extreme example is in the pharmaceutical sector, where parent firms have an innovative effort of 13.8 in sharp contrast to the innovative effort of their Brazilian subsidiaries, which amounted to only 1.06 (Redesist).

Finally, it is also worth looking at the innovative performance of Brazilian multinational firms. There is evidence that the relatively higher competitiveness and exports of these firms are positively influenced by their technological innovations, which result in turn from their foreign investments. Brazilian multinationals spend more in labor training relative to their earnings, and their international operations generate feedback mechanisms which are essential for technological development. Moreover, oftentimes these firms are driven by the goals of gaining access to new technologies in their decisions to invest abroad (Arbix, Salerno and De Negri, 2005b).

Secondly, it is important to look at the sectoral distribution of innovation in Brazil. Which industries are most innovative, and what is the degree of sectoral concentration? Based on surveys conducted by the Instituto Brasileiro de Geografia e Estatística and compiled by IPEA, Peirano (2007) finds that activities related to technological innovation are highly concentrated. Indeed, 78 percent of R&D expenditure is accounted for by only eight sectors. In particular, fuel, chemicals and pharmaceuticals, electronics and communications and the automotive industry comprise the principal innovating sectors in Brazil, accounting for 52 percent of such expenditures. A secondary group of industries include machinery and equipment, electrical machinery and apparatus, food products and aircraft, ships and other transport equipment (see Figure 1).

It is worth emphasizing that the large majority of sectors in Brazil do not innovate. Peirano (2007: 111) notes that in only two sectors are there more innovative than non-innovative firms, and none of these sectors is included among those with the highest R&D expenditures listed in Figure 1. He interprets these as "sectors in which the short-run prevails, with products adapted to the requirements of individual clients and influenced by fashion trends". Conversely, in the eight sectors identified as concentrating most R&D expenditures, nearly half the firms innovate. Peirano sees this as an indication that R&D expenditures may not only have a high sectoral concentration, but may also be largely accounted for by a low number of firms. For instance, the aircraft producer Embraer and the oil company Petrobrás account for more than 50 percent of the R&D expenditures of large firms, and an even greater share of the R&D of their respective sectors (Redesist).

Figure 1 – Sectoral Distribution of R&D Expenditures in Brazil, 2000 (in US$ and %)



Source: Peirano (2007: 100).

4) THE ROLE OF THE STATE IN TECHNOLOGICAL INNOVATION IN BRAZIL

4.1) THE PROCESS OF INDUSTRIALIZATION

Industrialization transformed Brazil, a producer and exporter of primary goods, into a country with a diversified industrial base in only half a century, running roughly from 1930 to 1980. In contrast to the strategy followed by several newly-industrializing Asian countries, which aimed at integrating their national economies into dynamic foreign markets, economic planning in Brazil had the goal of strengthening the domestic market and thereby rendering the country less dependent of foreign markets. Accordingly, import substitution stimulated by protectionist policies, by the Target Plan of the late 50s, by the sectoral policies of the late 60s and the 2nd National Development Plan of the late 70s and by increasing domestic demand generated a relatively diversified industry. State policies to support the newly-developed industrial structure included protection (tariffs, non-tariff barriers, exchange rate policies and private investment regulation), promotion policies (tax incentives and subsidized credit), action plans and direct investments.

Yet, such industry was overprotected, displayed low degree of insertion in global markets, low productivity levels, and was technologically outdated. According to Suzigan, De Negri and Silva (2007: 32), “although effective at the time, these State operations had after effects. While striving for a ‘complete industrial structure’, or ideal and permanent scheme for protecting and promoting industrial activities, they ultimately generated a series of inefficiencies that hindered specialization and limited insertion into the international market. As a result, the Brazilian economy became extremely closed, resulting in one of the lowest import coefficients in the world and causing many industries to lose competitiveness in both domestic and foreign markets”.

These problems were compounded in the 80s, a decade characterized by a profound macroeconomic crisis, economic instability and industrial stagnation.

The adoption of market-oriented policies and especially trade liberalization in the early 90s represented a considerable challenge to Brazilian industry, which had to begin facing foreign competition in both domestic and international markets. Unprepared and immersed in an unfavorable macroeconomic scenario, the Brazilian industry began to ration its productive processes so as to reduce costs and increase efficiency. The result was frequent fluctuations in industrial output accompanied by falling employment. Nonetheless, liberalization forced firms to seek higher productivity, initially operating in markets where competition is driven primarily by price rather than product differentiation, but also where technological innovation produces greater positive effects on earnings, reinvestment and employment (Suzigan, De Negri, Silva, 2007: 24).

4.2) THE NATIONAL SYSTEM OF INNOVATION

In the late 60s, the National Technological Development Fund (*Fundo Nacional de Desenvolvimento Tecnológico* – FUNTEC) was created in the ambit of the National Bank of Economic and Social Development (*Banco Nacional de Desenvolvimento Econômico e Social*), as well as an agency to finance technological development (*Financiadora de Estudos e Pesquisa* – FINEP) which managed the National Fund for Scientific and Technological Development (*Fundo Nacional de Desenvolvimento Científico e Tecnológico* – FNDCT). For many years, FNDCT constituted the most important tool disposed by the Brazilian government to finance scientific and technological activities. A National System for Scientific and Technological Development (*Sistema Nacional de Desenvolvimento Científico e Tecnológico* – SNDCT) was formally established in the early 70s, having as its main agency the National Research Council, three years after transformed in the National Council of Scientific and Technological Development (*Conselho Nacional de Desenvolvimento Científico e Tecnológico* – CNPq), an advising body for the formulation of sectoral policies. Later, together with the creation of graduate university programs and research institutions, technological institutes and R&D centers were established within state companies. The most noteworthy of these was the Brazilian Company of Agricultural Research (*Empresa Brasileira de Pesquisa Agropecuária* – Embrapa), which has been responsible for much of

the success in agricultural exportation enjoyed by Brazil since then. The Basic Plans for Scientific and Technological Development (Planos Básicos de Desenvolvimento Científico e Tecnológico) were created in the ambit of the National Development Plans (*Planos Nacionais de Desenvolvimento* – PNDs).

The SNDTC was largely abandoned during the crisis of the 80s. As macroeconomic stability, and particularly inflation control, became the priority of economic policy, technological development plans were interrupted. Public budgets for the SNDTC were severely cut and incentives offered by the short-lived New Industrial Policy (Nova Política Industrial – NPI) of 1988 were overridden by the failure of stabilization plans. The computer law of 1984 protected the Brazilian market for local producers until 1991, with insignificant effects on technological innovation.

4.3) RECENT TECHNOLOGICAL POLICIES

In the aftermath of the debt crisis of the 80s and the economic liberalization of the 90s, new governmental incentives for R&D have increased investments in engineering and product development, especially in the auto industry. Two important programs created in 1993 were the Program for Industrial Technological Development (*Programa de Desenvolvimento Tecnológico Industrial* – PDTI) and the Program for Agricultural Technological Development (*Programa de Desenvolvimento Tecnológico Agropecuário* – PDTA). These programs allowed tax deductions for expenditures associated with R&D activities. According to Avellar (2008), the R&D expenditures of firms that benefited from PDTI were 64 to 100 percent greater than identical expenditures in similar firms that did not participate in the program.

In the late 90s the Ministry of Science and Technology succeeded in creating sectoral funds, thereby linking federal government tax revenues to science, technology and innovation policies and preventing the underfunding of such policies as happened during the 80s. Initially, these funds produced little impact due to low budgets and excessive regulation, which benefited firms only indirectly through joint projects with universities and pulverized the available resources. However, during the 21st century the sectoral funds received significantly more resources, which were used to directly finance firm R&D as allowed by the new legislation. The sectoral funds also allowed the state to share the risks and costs of private firm R&D.

In 2003 the Industrial, Technological and Foreign Trade Policy (*Política Industrial, Tecnológica e de Comércio Exterior* – PITCE) was established, focusing primarily on innovation and technological development and highlighting the critical role of certain strategic sectors for diffusing technological innovation, namely, semiconductors, software, capital goods and pharmaceuticals. The PITCE also considered long-term development of cutting-edge sectors such as nanotechnology and biotechnology.

Finally, the so-called “good law” of 2005 substituted for PDTI and PDTA. This law gives tax breaks for companies that produce software in Brazil and export 60 percent of their annual gross revenue. It also permits automatic tax deduction of R&D expenditures, which previously had to be requested from the government. Finally, the law allowed the government to finance part of the salary of researchers working with R&D in private firms (IPEA, 2009: 353).

Despite such considerable achievements and improvements in state policies and institutions that promote technological innovation in Brazil, R&D expenditures in the country remain relatively small. Such expenditures represented only 1.3 percent of GDP in 2005, whereas OECD countries spend on average 2.3 percent of GDP on R&D (IPEA, 2009: 354). R&D investments in Brazil relative to GDP are also lower than those of Russia and China (see Table 2).

5- INNOVATION, SCIENCE AND THE BRAZILIAN EDUCATIONAL SYSTEM

Whereas education is widely considered as an end in itself and treated as a basic right of citizenship in the Brazilian Constitution of 1988, it is evidently also closely and causally linked to technological innovation. The Brazilian national system of education is comprised of numerous institutions that vary widely in their nature and goals, from world-class research universities and research financing agencies to elementary schools and professionalizing programs.

The crucial role of basic education in economic development has been examined extensively in the academic literature. In particular, studies that attempt to explain the superior economic performance of East Asian newly-industrializing countries relative to their Latin American counterparts often point to education as a significant factor (e.g., Sachs, 1987: 296; Haggard, 1991: 186): the former have prioritized investments in elementary education as opposed to the latter, which concentrated investments in university education. Moreover, the university system itself is highly dependent on elementary schooling as a supplier of qualified students. This means that the systems of basic and higher education are not independent of each other; and that the poor quality of the former may in the long-term compromise the performance of the latter.

Elementary education indicators reveal that Brazil is still underperforming relative to the OECD countries and even the BRICs, as shown in Table 6. Particularly with regard to average years of schooling and quality of science and math education, Brazil is outperformed by all other BRICs. Accordingly, UNESCO’s (2007: 201-202) Education Development Index places Brazil in the 76th position, above India (105th) but below Ecuador, Bolivia and

Paraguay. Similarly, in the international educational ranking offered by the OECD (2007), Brazilian students ranked close to last in science: the country occupied the 53rd position out of 57 countries, far behind Russia.

Brazilian universities developed relatively late. Portuguese colonizers, in contrast to the Spanish, did not allow the establishment of universities in Brazil, which only began to appear in the early 20th century, mostly dedicated to teaching. Nonetheless, Brazil has succeeded in building an impressive system of graduate programs in a relatively short period. According to Table 7, between 1976 and 2006, the number of graduate programs increased from 673 to 3,422, which corresponds to an average increase of 5.7 percent. Considering only the period between 1996 and 2006, the yearly average increase in the number of graduate programs goes up to 8.4 percent. In 2006, the system was made up by 2,240 masters programs and 1,182 doctorate programs comprising over 125 thousand students – two thirds of which were masters students and one third of which were doctorate students – and 32 thousand professors. By 2007, about 27 thousand masters and 10 thousand Ph.D.s graduated.

Two federal agencies finance education and academic research in Brazil, one in the ambit of the Ministry of Education (CAPES) and the other in the Ministry of Science and Technology (CNPq). The latter has increased considerably its investments in scholarships for graduate study both in Brazil and abroad and in research financing, from R$ 441,660 in 2000 to R$ 835,603 in 2006, mostly in the fields of engineering and biological, exact and earth sciences (see Figure 2). The number of graduate scholarships granted by the Ministry of Education reached a total of 41,901 in 2008, of which 24,513 were for masters students, 16,277 were for doctorate students and 1,111 for post-docs. In addition, 4,135 scholarships were granted by the Ministry of Education for study abroad (GEOCAPES, 2009). Health, human and applied social sciences were respectively the three fields which most received scholarships. Still, according to the World Bank science and engineering university enrollment in Brazil in 2004 corresponded to only 15.89 percent of total enrollment, as opposed to 22.14 percent in India.

Such investments in graduate university programs have produced positive results with regard to scientific production indicators. According to data from the National Science Indicators, the production of scientific works by Brazilians has risen significantly both in absolute terms (from 10 thousand to about 63 thousand) and as percentage of the total of papers produced in the world (from slightly below 0.5 to slightly above 1.6) from 1981 to 2005 (see Figure 3). Similarly, citation analysis shows that the impact of Brazilian scientific production has increased 47 percent from 1981 to 2005; and that relative to the world baseline impact the Brazilian impact is still small but increasing (see Figure 4). In terms of country rankings, Thomas Reuters data shows that Brazil has in

Table 6 – Education Indicators of the BRICs

	Brazil		Russia		India		China	
	actual	normalized[1)]	actual	normalized[1)]	actual	normalized[1)]	actual	normalized[1)]
Adult Literacy Rate (% age 15 and above), 2004	88,60 innovate and differenciate products	4,02	99,40 specialized in standardized products	7,50	61,00 5differentiate and have lower productivity	1,36	90,90	4,62
Average Years of Schooling, 2000	4,88	2,02	10,03	8,94	5,06	2,45	6,35	4,68
Gross Secondary Enrollment, 2004	102,00	8,60	92,90	6,59	53,50	2,33	72,50	3,33
Gross Tertiary Enrollment, 2004	22,30	4,08	68,20	9,04	11,80	2,64	19,10	3,84
Life Expectancy at Birth, 2004	70,90	4,47	65,20	2,73	63,50	2,27	71,40	4,77
Internet Access in Schools (1-7), 2006	3,60	4,48	3,80	5,17	3,80	5,17	4,00	5,86
Public Spending on Education as % of GDP, 2003	4,10	3,89	3,70	3,19	3,30	2,30	2,10	0,44
Prof. and Tech. Workers as % of Labor Force, 2004	13,28	2,10	32,29	9,01	-	-	-	-
Quality of Science and Math Education (1-7), 2006	2,90	1,38	4,50	5,95	5,70	9,31	4,10	4,57
Extent of Staff Training (1-7), 2006	4,20	6,55	2,90	1,64	4,80	7,59	3,40	3,53
Quality of Management Schools (1-7), 2006	4,10	4,48	3,60	2,59	6,00	9,74	3,40	1,98
Brain Drain (1-7), 2006	3,90	6,61	3,50	5,57	3,70	6,09	3,80	6,35

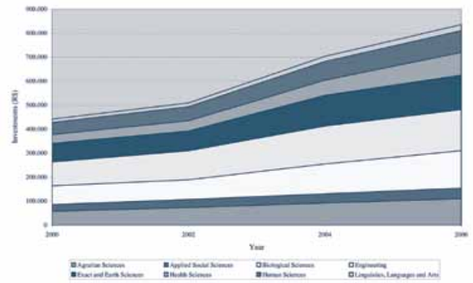
[1)] Countries were ranked from "best" to "worst" using their actual scores on each variable. Then, their scores are normalized on a scale of 0 to 10 against all countries

Table 7 –Number of Masters and Doctorate Programs, 1976, 1996, 2006

	1976	1996	2006	Average Yearly increase (%)		
				1976 - 2006	1976 - 1996	1976 - 2006
Masters	490	1,083	2,240	5.3	4.0	8.1
Doctorate	183	541	1,182	6.6	5.6	8.8
Total	673	1,624	3,422	5.7	4.5	8.4

Source: Salerno and Kubota, 2008: 43.

Figure 2 – Investments by Ministry of Science and Technology in Scholarships and Research Financing by Fields of Study, 2000-2006



Source: CNPq, Estatísticas e Indicadores da Pesquisa no Brasil, p. 11, available online at http://www.cnpq.br/estatisticas/docs/pdf/doc_completo_2008.pdf

2008 reached the 13th position, two positions higher than in 2007, with 30,021 articles published in 10,000 specialized, peer-reviewed journals. Relative to the BRICs, this position is still far below China, which ranked 2nd with 112,318 such articles and India, ranked 10th with 38,366 articles, but surprisingly above Russia, which occupied rank 15th with 27,605 articles. With respect to the percentage of world total production, however, Russia is still slightly ahead of Brazil (2.6 relative to 2.1 percent, respectively), which lags even further behind India (2.9) and China (8.4) (see Table 8).

According to the National Science Indicators, Brazilian scientific publications concentrate in agriculture (2.37 percent of total world papers), space sciences (1.62), physics (1.49), microbiology (1.30), plant & animal (1.24); mathematics (1.19), molecular and genetic biology (1.17), ecology/environment (1.12), biology & biochemistry (1.10) and pharmacology (1.07). Considering only the most productive fields in Brazil, the country contributes on average with 0.98 percent of the world papers.

Despite the impressive achievements in terms of graduate education and scientific production, there is evidence that such achievements are not being translated into firm innovation. The empirical support for this conclusion is derived primarily from patent data. Before describing the empirical results themselves, a few considerations are in order regarding the use of patents as an indicator of innovation.

Patents remain the single best available measure of firm innovation performance, in spite of its shortcomings. In contrast to R&D, which is a measure of the inputs and development efforts that go into the innovation process, patents measure innovation outputs by focusing on commercially successful applications. Yet, patenting is a practice that is highly concentrated in a few R&D-intensive sectors. In addition, firms often decide not to disclose innovations that are commercially sensitive and the propensity to patent may also vary according to the costs of patenting. Furthermore, many patents may never be implemented commercially. Patents may even occasionally operate as a barrier to innovation by slowing the diffusion of knowledge or creating prohibitive barriers to market entry. The commercial value of patented inventions, moreover, varies considerably. Indeed, the value distribution of patents is skewed: a few patents have a high value, whereas many have lower values. Finally, international comparisons are also affected by differences in procedures and standards across patenting offices (Economist Intelligence Unit, 2009: 2-3). Still, since there are no generally recognized, easily applicable methods for measuring the value of patents, the number of patents granted in the largest national market, the US, may serve as proxy, albeit an imperfect one, of the evolution of technological innovation output across countries.

Figure 5 shows that since the mid-nineties Brazil has been falling

Table 8 - Scientific Publications in BRICs (2008)

	World Rank	Number of articles publish in 10,000 specialized, peer-reviewed journals	2006
Brazil	13	30,021	2.1
Russia	15	27,605	2.6
India	10	38,366	2.9
China	2	112,318	8.4

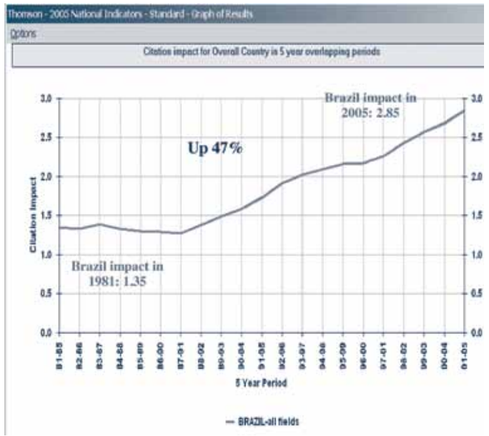
Source: Thomas Reuters Report 2008.

Figure 3 – Brazilian Publications, 1981-2005 Number of Papers Published by Brazilians Number of Papers Published by Brazilians as a Percentage of World Papers



Source: Thomson Reuters, National Science Indicators, 1981-2005.

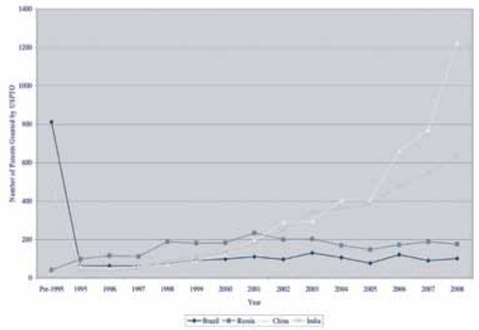
Figure 4 – Brazilian Citation Impact, 1981-2005 Brazilian Citation Impact Brazilian Citation Impact Relative to World





Source: Thompson Reuters, National Science Indicators, 1981-2005

Figure 5 – Number of Patents Granted in the US to BRIC, pre-1995-2008



Source: US Patent and Trademark Office, available online at http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_utl.htm .

behind considerably relative to other BRIC in patents granted by the US Patent and Trademark Office (USPTO). Until 1995 Brazil had obtained 812 patents in the US, almost double the amount obtained by India (456) and China (466) and more than twenty times the amount obtained by Russia (41)[3]. However, especially since the beginning of the 21st Century, Brazil was outpaced in its number of patents of US origin mainly by India and China – both of which increased dramatically their patenting in the US – and, to a lesser, extent, also by Russia. In 2008, Brazil's US patents (101) corresponded to about one sixth of India's (634) and one twelfth of China's (1225).

It is also worth looking at the distribution of patents granted by the Brazilian National Institute of Industrial Property (*Instituto Nacional de Propriedade Industrial* - INPI) between residents and non-residents of the country. Overall, non-residents account for about 66 percent and residents for only 34 percent of all patents granted in Brazil in the period 2003-2005 (see Table 9), which suggests that most of the technological innovation employed in the country is produced and controlled by foreigners[4]. Table 9 also shows that residents enjoy an advantage in terms of patent protection in only five areas;

3 The Cold War had, of course, undermined the patenting of Russian inventions in the US until the early nineties.

4 Non-residents are not necessarily foreigners, but it is safe to assume that most non-residents are not Brazilians.

whereas non-residents enjoy such advantage in all other 26 areas, and in nine of these they enjoy strong advantage, holding over 80 percent of the patents granted by INPI. Of these nine areas, only two, namely Base Chemistry and Surface Treatment, are not directly associated with information and communication technologies and health technologies. Yet, given that information/communication and health constitute arguably the two leading edge sectors in terms of technological invention and commercial value, Brazil's lack of innovation in these sectors may represent a considerable limitation in its economic development.

By comparing the areas of technology in which Brazil has been most competitive in scientific publications with those in which the country has been most competitive in patenting, a paradox arises. Both in publications and patenting Brazil has excelled in agriculture. However, while the country has concentrated its scientific production in many health-related fields such as microbiology, plant & animal, molecular and genetic biology, biology and biochemistry and pharmacology, these are among the areas in which non-residents have the strongest advantage in terms of patenting.

How can we explain this paradox? Why hasn't Brazil's scientific production as measured by publications and citations been reflected in its technological innovation as measured by patents? In a nutshell, Brazil has failed to develop adequate cooperative linkages between universities and firms, which continue to operate for the most part independently of each other[5]. Indeed, less than 30 percent of Brazilian scientists and engineers work with R&D in the private sector, as opposed to 70 percent in Germany and 80 percent in the US (IPEA, 2009: 353).

The lack of collaboration between the academic and business sectors results first from the structure of incentives for research which was built by Brazilian educational policies and institutions. In general, university researchers receive promotion, prestige and recognition for their publications, not for technological innovations that may arise from their work. Incentives to publish are clearly put forward by the two financing agencies of the Ministries of Education and Science and Technology, both of which measure research performance in terms of publications. This helps to explain Brazil's improving position in the global production of science. Yet publication is largely antithetical to patenting, for once innovations appear in articles, books and the like they become forever unpatentable, because they loose their novelty. Moreover, publications disseminate knowledge that can be critical for potential technological innovations indiscriminately. Brazil therefore is financing the training and research of professors whose scientific production may be easily and freely appropriated by foreign firms.

Second, the absence of appropriate cooperation linkages between universities and firms reflects a long-prevailing dominance of the so-called "linear model" of innovation. This model has its origins in the work of Vannevar Bush, ordered by President Franklin D. Roosevelt during the end of World War II. Bush argued that basic research should be developed without regard to practical benefits (Salerno and Kubota, 2008: 29). Accordingly, the linear model "saw innovation as a linear process from basic research via applied research and development (R&D) to market introduction of the resulting products or technologies" (OECD, 2005: 18). This model has profoundly influenced Brazilian policies.

Yet, as empirical studies of the innovation process showed that firms interacted with various external organizations and relied heavily on their own value chains for innovation-related knowledge and information, the view of the innovation process shifted to what is currently known as the interactive or systemic model of innovation. Such systemic model, adopted very successfully by South Korea, implies a more dynamic innovation approach which broadens the focus from the original basic and applied science dichotomy to a more generic policy area in which firm innovation is directly stimulated. Moreover, coordinated and strategic actions are needed to induce a coherent policy framework for dynamic innovators and structural change (OECD, 2005: 19).

Only since the 90s Brazil has begun to adopt this new model of innovation. In particular, the sectoral funds aimed at promoting the development and consolidation of partnerships between universities, research centers and the productive sector has represented a step in this direction. Similarly, the "good law" permitted public financing of researchers working with technological innovation in private firms. Nonetheless, these initiatives are still incipient and probably insufficient to produce the desired results.

6) CONCLUSIONS

Brazil's experience with innovation confirms mainstream theories of economic development. Firms that innovate most in the country employ a larger number of workers, who receive higher wages, are more qualified and remain on average longer in their jobs; they also present higher productivity and export more than firms that innovate less. This evidence suggests that innovation should be a prime target of both economic and social policy.

Yet, innovation is still rare among Brazil's firms and economic sectors. Firms that innovate are few relative to firms that do not innovate and R&D investments in the country still fall behind those of the OECD and other BRIC both in relative and absolute terms. Such investments need to be promoted by the state particularly with

5 The major exception which is worth mentioning is Embraer, the world's third largest aircraft producer whose success has largely depended upon the supply of highly qualified engineers from the Instituto Tecnológico da Aeronáutica (ITA) and the Centro Técnico Aeroespacial (CTA). Embraer, ITA and CTA effectively created an innovation cluster in São José dos Campos, in the State of São Paulo.

Table 9 – Technological Distribution of Patents Granted in Brazil Between Residents and Non-Residents, 2003-2005 (in percentages)

	Area of Technology	Non-Residents	Residents
Strong Advantages for Non-Residents	Organic Chemistry	97.71	2.29
	Pharmaceuticals-Cosmetics	93.73	6.27
	Macromolecular Chemistry	92.60	7.40
	Biotechnology	91.08	8.92
	Base Chemistry	87.40	12.60
	Telecommunications	87.03	12.97
	Semi-Conductors	84.58	15.42
	Computers	84.54	15.46
	Surface Treatment	84.17	15.83
Advantages for Non-Residents	Metallurgy Materials	79.76	20.24
	Optics	78.06	21.94
	Technical Procedures	75.89	24.11
	Work with Materials	75.55	24.45
	Agricultural Products and Food	74.69	25.31
	Not Classified	74.44	25.56
Advantages for Non-Residents	Machinery and Tools	67.97	32.03
	Motors, Pumps and Turbines	66.92	
	Medical Engineering	65.65	33.08
	Mechanical Components	63.83	34.35
	Nuclear Techniques	62.32	36.17
	Audiovisual	61.68	37.68
	Electrical Components	59.39	38.32
	Space and Weaponry	56.04	40.61
	Analysis, Measurement and Control	53.92	43.96
	Transportation	53.01	46.08
	Environment and Polution	51.81	46.99
Advantages for Residents	Graphical Maintenance	47.41	52.59
	Thermal Procedures	42.87	57.13
	Construction	36.78	63.22
	Agricultural and Food Equipment	31.72	68.28
	Family Consumption	25.82	74.18
	Total	66.14	33.86

Source: INPI apud IPEA (2009: 356).

regard to multinationals, which present lower effort to innovate than Brazilian firms, tend to invest more on external R&D and concentrate R&D activities in their headquarters. Finally, it is also important to reduce the sectoral and firm concentration of R&D spending in the Brazilian economy.

Brazilian policies and institutions have underscored the importance of the state as well as of global markets in promoting innovation. The overprotected economy which endured until the 90s produced firms that had little productivity and used outdated technology. Since the 90s, and particularly in the 21st century, Brazilian policies have succeeded in promoting greater firm competitiveness through liberalization and state-sponsored R&D. The recent increase in internationalization of Brazilian firms and their relatively superior performance in innovation are also positive outcomes that highlight the importance of globalization for technological development.

Despite evidence that Brazil has quickly built a relatively sophisticated system of graduate education and provides considerable and increasing financial support for academic research, which has in turn significantly increased the country's share in and impact on world scientific production, such achievements have not been translated into better firm innovation performance as measured by patents. This constitutes evidence of the flaws in the linear model of innovation which has traditionally guided Brazilian policies. Investments in science and investments in innovation are not one and the same. Firm R&D will not necessarily follow from scientific production in universities, and therefore needs to be directly promoted.

In addition, Brazil needs to invest more on elementary education and to create incentive structures for patenting and firm R&D among academic researchers – and not just for publishing. As it is, the increasing number and visibility of publications by researchers funded by the Brazilian government not only undermine patenting but also create the risk of transferring commercially valuable and costly knowledge to foreign competitors. The establishment of the sectoral funds as well as the adoption of the so-called "good law" are important initiatives in the direction of establishing cooperative linkages between universities and firms with regard to R&D.

Brazil's demonstrated competitiveness in the production and exportation of commodities should not deflect its need to invest in technologically-intensive sectors. Such investment is particularly pressing at the current context, when, similarly to the early 90s, the Brazilian industry is facing considerable challenges and may be confronting a crucial turning point. Indeed, the importance of technological innovation is even more imperious in the aftermath of a severe global financial crisis that has temporarily made the prices of commodities plummet and produced a significant appreciation of the Brazilian currency relative to the US dollar, thereby undermining the competitiveness of Brazilian exports. Since competing by price has become unviable given the increase in the prices of Brazilian goods in foreign currency, product differentiation becomes paramount. Moreover, the fact that in the Brazilian economy technologically-intensive sectors have been the most impacted by the crisis but also the ones displaying the fastest recovery (De Negri, Alvarenga and Santos, 2009) underscores the importance of policies and institutions that promote innovation and thereby help to support these sectors.

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BRIC: A VIRTUAL PROJECT OR A NATURAL REALITY?

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The BRIC phenomenon is very young by historical standards. The four countries have started their convergence realizing the need and practicability of aligning positions on the world arena and more active economic interaction by the 2005, when systematic consultations on the level of Ministers of Foreign Affairs began. The group of the four countries was institutionalized at the summit level in the 2009 in the city of Yekaterinburg where it was decided to repeat the BRIC Summit in Brazil next year. Then the BRIC countries agreed a common platform and use it while taking part in the G20 summit in Pittsburg. Actually the result didn't correspond to the declared demands. But well begun is half done. Anyway the decision of enlargement of quota of capital and votes in the IMF for the four group members was made in Pittsburg. Another symptomatic decision was consent of the traditional centers of the world economy and main actors of the G-7/8 to delegate to the G-20 the functions of development and decision making directed at the restructuring of the world financial and economic architecture, and collective actions aimed at recovery after the global economic crisis.

ARGUMENTS OF THE SKEPTICS

Meanwhile there is some skepticism and certain restraint in estimation of the BRIC meaning and role till now. In political quarters and in academic community. What arguments is this restraint based on? Firstly, it was alleged that till now the BRIC group is «virtual», that this association is not institutionalized or is insufficiently institutionalized. Second, there is an opinion that differences within the group of «four» are too significant to let it work in a jointly and goal-oriented way. Third, some others affirm that till now cooperation with the leaders of the «collective West» is more important for each member of the «quartet» than cooperation in the BRIC format. **The fourth argument** of the skeptics is that the practice of bilateral and cross partnership within the group of «four», as a rule, is limited and poorly diversified.

Some of these arguments are not groundless at all and have their reasons. We shall admit that. With that we have a good opportunity to present valid objections.

OBJECTIONS TO SKEPTICS

The first one. The BRIC emergence, seemingly, initially took place outside the sphere of the policy decisions. The question was an expert evaluation in the interests of the investment business (conclusions made by the Goldman Sachs experts in the 2001). But let`s remember the thesis of the academician Evgeniy Primakov, then the Minister of the Foreign Affairs of the Russian Federation, a thesis about a «triangle» formed by Russia, India and China (1996),

as well as his diplomatic efforts that turned the Russian-Brazilian relations into strategic partnership in the 1997. Considering that, the political practicability of the formation and interaction of the group of four became evident before the forward-looking experiment by the Goldman Sachs.

Further course of events related to the economic capacity building of the four emerging giants and their diplomatic convergence allow us to apply here the following maxim: «If there were no BRIC group, we should have invent it».

We see the contemporary epoch **as a transition one** because of the change of the technologic paradigm, because of the globalization effect and because of the imperative of restructuring the global regulation mechanism. But at the same time the present epoch is transitional because of the dialectics of ascension/descension of the world system centers.

Let us remind some facts. The share of the USA by the full GDP volume in the world economy virtually equaled to the half thereof in the second part of the 1940s. Now it`s about 25% in nominal terms and about 20% in purchasing power parity. By the middle of the last century, USA indeed became monopolist in emission of the world`s reserve currency. The dollar stability is placed in doubt today, Euro has become rather solid alternative, a tendency to form regional reserve currencies or use national currencies for international payments is more and more evident. We can`t say yet that dollar will be refused, but we can clearly see an aspiration to diversify liquid assets in many countries.

We don`t predict a radical change of the leadership in the world economy and in the world politics in the short term. We are aware of the USA persisting dominance in what refers to the market potential, technological and military strength. We just affirm that the present leader of the «collective West» **has left behind the apogee of its power** which refers to the 90s – period of «quasiunipolarity». We do also support the thesis of the gradual substitution of the «westernization» process by the «easternization» one that finds more and more supporters even in the USA. I can just add one aspect more: «easternization» is complemented with «southerization».

I`d like to underline once again that we don`t wait for some major changes in correlation of forces in the world today and tomorrow. But we see their inevitability in the medium term and in the longer term. One, who ignores them today or will tomorrow, could find himself in serious loss.

We affirm that more or less the **present transitional situation leads to the multipolarity** that could be embodied first of all by the emerging centers (leaders) represented in the BRIC group.

The objective character of BRIC group emergence is conditioned, of course, by the «critical mass» of the resources provision (resources in the broad sense of the word) possessed by the group members. It`s important to take into account different structure of production cost, more favorable for economic growth (hence, by the way, outstripping growth rate of corporations in the BRIC area and their transnationalization). The domestic market in the BRIC countries is not «saturated» unlike the traditional centers of the world economy. Here we can add a possibility to turn multimillion masses of population into the middle class category and, correspondingly, solvent consumers. We should also take into account the traditionally influential role of the State in the group of four that is mobilized or could be mobilized for realization of the «ascension project ».

In the very beginning of the speech we`ve already mentioned the symptoms of institutionalization of the BRIC. Let me underline it once again that these advances take place within the historically short time spans. That would be impossible, firstly, if there were no advances in the world hierarchy in all the four cases. Second, if it where not for an objective need of interaction in all the four cases. There is an inert perception of what could be classified as international association. The inertia comes from the XX century with its rigid block structures. The new century diversifies the types of international associations requiring for more flexibility and discarding former stereotypes and standards. The BRIC fits this tendency very well.

In what refers to the **second** argument we can say the following. It`s naive to disclaim serious differences in the BRIC group. On the one hand, these are the countries with diversified, and in some aspects even excess provision with natural resources (Russia and Brazil after recent discovery of the richest oil-gas fields), on the other hand – with large but in some important aspects defective resources potential, especially in energetic aspect (China, India). The giant demographic potentials of China and India are accompanied with large and still growing demographic potential of Brazil, as well as with stagnating (or reducing) demographic potential of Russia. Meanwhile Russia clearly stands out against the common background with its persisting relatively high mean level of education and Soviet heritage of the «Big Science». Russia remains leader in possession of nuclear and missile weapons and diversity of its military industrial complex. China follows it with a large distance separating China from India, and all the more from Brazil which isn`t a threshold state in the sphere of weapons of mass destruction.

The strained ecological situation in China and India contrasts to the abundant ecological reserves of Russia and Brazil (including Siberia and Amazonia). Defects of food provision in China and India are accompanied with the large agrarian potential of Brazil and potentially Russia (taking into consideration the reserve of agricultural lands).

All these differences are not an obstacle to economic interaction at all, but rather a **base for complementarity.**

Third objection. We shall admit the simple fact that economic and sometimes political interaction with the «collective West» till now has been the priority in foreign relations for all the BRIC countries. But it`s absolutely senseless to consider the BRIC phenomenon as an alternative to these priorities. That` another matter: it`s one more major strategic direction for diversification and enrichment of their inclusion in the world economy and world politics. The recent practice shows some impressive advances on this direction.

Here we`ll present our **fourth objection**. The article by the Brazilian president Luis Inacio Lula Da Silva published on the eve of the Yekaterinburg Summit says that the growth of the sales volume within the BRIC group over the last 5 years (2003-2008) equaled to 500%. It`s a kind of historical record (Refer to Kommersant, 16.06.2009).

A tendency characterizing the BRIC is significantly outstripping growth rate of the cross sales volume within the group against the index of the world economy dynamics and foreign trade growth of the traditional centers of the world economy. In 1995-2008 the average growth rate of the world trade equaled to 7.7%, while that one in USA equaled to 6.4%. The Brazilian average annual index of export growth equaled to 11.8% over the indicated period and its export to Russia grew in average 17.5%, to India – 10.0%, to China – 22.2%. Russia with its average export growth rate of 13.6% increased its export to Brazil 25,3%, to India – 19.9%, to China – 13.7%. China had an average export growth rate of 19% and increased its deliveries to Brazil almost 28% in annual average rate, to Russia – 26%, to India – 33%.

The record rates characterize the dynamics of trade within the BRIC group in the case of India as well, but with an exception. The indicated period witnessed a slowdown of the Indian export to Russia. But this situation began to improve before the global economic crisis. Average annual growth rate of the Indian export equaled to 14.4% in 1995-2008, especially to Brazil – 32.3%, to China – 30.0% 1[*].

So, the facts speak for themselves. But, of course, we shall admit that the cross trade doesn't correspond to the advanced standards in matter, that it isn't appropriately supported with the investment, production, scientific and technical cooperation yet. But there are some serious advances in these spheres also. There are several examples, including the Harbin Aircraft Plant assembling one of the Embraer models, Chinese-Brazilian and Russian-Brazilian

1 [*] Давыдов В.М., Бобровников А.В. Роль восходящих гигантов в мировой экономике и политике (шансы Бразилии и Мексики в глобальном измерении). М., ИЛА РАН, 2009, с. 191.

cooperation in the space science, and participation of the Russian companies in nuclear power plants construction in China.

I`d like to accent once again that it is an initial phase of cooperation development, that till now has been developed bilaterally. But it`s obvious that there are some serious backgrounds for multilateral cooperation in the format of four countries. It`s obvious due to the simple fact that integrating efforts of the BRIC countries in some economically perspective directions could generate a serious multiplicative effect.

SPECIFICS OF APPROACH TO THE BRIC FORMAT

It`s obvious that there are some diverged interests, conditioned by the difference in geopolitical situation and historical tensions (India – China) in the BRIC format. Ascension of China against the BRIC background and its self-sufficiency showing up to the maximum extent raise a question about the interest in the BRIC format.

Meanwhile there are good reasons to affirm that the BRIC countries have more interests in common than divergences. Then, where do they coincide?

Speaking generally, we can indicate that the field of common interests includes the issues of international security, global regulation of economic processes and resolution of global environmental and climatic problems. The BRIC countries are equally interested in improvement of the international law that would facilitate resolution of problems taking into account the interests of the world community in changing global situation, including also the interests and concerns of the BRIC countries. They are extremely interested in favorable external conditions for solving social problems that are specially complicated practically in each country of the "quartet".

It's obvious today that neither the main leader of the "collective West", nor the "collective West" in general can assume all the responsibility for the solving of the crucial international problems. It`s natural that the thesis of "shared responsibility" is more and more frequent in the contemporary discourse of the Western leaders and it`s directed to the BRIC countries above all. The recent facts demonstrate the same though. The delegation of the G8 functions to the G20 is very symptomatic in this regard.

In the BRIC format **Brazil** has perhaps the least access to the global regulation "club". But it has political will to implement the ascension project. The deviation amplitude (depending on the alteration of political forces in power) is not very important here. Its interest in cooperation in the BRIC format is very significant. BRIC provides Brazil with serious advantages in what refers to its

international status and opportunities to transform into a world actor from a regional one (as it has been till now mainly).

India (along with Brazil) is provided by the BRIC with a rare chance to overcome its regional closeness (geopolitical “impaction”). But political will for a full-scale implementation of the BRIC project and active role in this coalition is not clearly defined by now, as it seems to me. The oscillation amplitude in this respect is rather wide in perspective because the political leadership in the country is dispersive. Moreover, the dialectics of Indian relations with the key actors outside the BRIC format will be very important.

It`s obvious that nowadays China is the most self-sufficient member of the BRIC, and probably it is traditionally careful in “additional liabilities”. Our hypothesis is associated with the idea that the BRIC is more important for the Chinese government as an influential group of collective lobbying for resolution of “applied problems” being especially interesting for Beijing.

There is some risk of becoming a “duumvirate” and reduction of interest towards the BRIC in the Chinese external relations priority system. It could be impacted by the further China outstripping development as compared to the other members of the group. But we can affirm that in foreseeable future Beijing will abstain from “excessive involvement” in relation to Washington, taking into consideration the economic tensions, doubts about the stability of the American assets, searching for an alternative for the dollar or a parallel medium for international payments, etc. In certain degree it was proved during the tense negotiations with the president Obama in November of the current year in Beijing that showed some serious contradictions. Moreover Hu Jintao made it clear that China is not interested in allied relations with the USA.

Russia since the emergence of the BRIC coalition became much more stable in what refers to its positioning on the world arena and received an instrument of implementation of the idea of multipolar world and principles of multivector foreign policy. BRIC for Russia is an important argument in its Western-oriented diplomacy and a serious chance (with appropriate efforts) for growth and modernization of the economy external sector. Political will in connection with the BRIC is obvious now but it hasn’t revealed to the full extent yet. Anyway it seems that its maturation process is growing and expanding in a sense.

WHAT IS THE BRIC GROUP NOWADAYS AND WHAT COULD IT BE IN THE FUTURE?

How should we perceive the BRIC today and what could this group of emerging giants transform into in the long term? My opinion is that it`s not just a new international «platform» for dialogue at the high level. It`s a coalition group, united by the aspiration for joint resolution of a number of strategic problems that are important for the BRIC countries as well as for the world community in general.

As it was mentioned before BRIC shouldn’t be perceived on the basis of stereotypes of the XX century characterized by rigid block structure. BRIC is a reaction to the new reality, to the transition situation of the XXI century leading to multipolar world order. But such transition is inevitably connected with certain risks that have already been demonstrated in the history at the moment of redistributing forces and influence on the world arena.

From this point of view the BRIC group, as one of the key structures reflecting a tendency to multipolarity, could play positive role in neutralization of the transitional risk. According to this logic it’s inappropriate and unpractical to perceive it as an antipode to associations of the traditional centers of the world economy and politics. According to the political philosophy of all of its members the BRIC doesn’t adhere to a principle of «friendship against somebody». We could also say that this principle couldn’t be a base for the BRIC formation.

Following the idea of the «art of achieving the possible» we can affirm that in short term, on the basis of combination of similarities and differences, BRIC can’t turn into a rigid structure. There is a possibility and a need to transform the BRIC project into a coalition with an effective coordination mechanism. In parallel way and by steps a mechanism of economical interaction should (and, in our opinion, will) be developed in the BRIC format in the form of preferential cooperation contracts of new type and major joint projects in scientific and technical sphere. In short term the BRIC members don’t demonstrate intentions to expand the association format. But this issue is entirely possible in the mid- and long term.

We think that the BRIC group has significant historical advantage that hasn’t been always taken into account. All the group members represent powerful civilizations of the contemporary world (in some cases with some elements of other civilizations): Iberoamerican, Slavic-Orthodox, Hindu and Sino-Confucian. This specific feature lets BRIC contribute significantly to the idea of “alliance of civilizations” in order to avoid the “clash of civilizations”.

TRANSFORMING THE BRIC INTO AN INFLUENTIAL INTERNATIONAL ASSOCIATION AND THE IDEA OF MULTIPOLAR WORLD

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The BRIC or BRICs is an example of an idea turned reality. The term was coined by Jim O'Neill, global economist at Goldman Sachs, to refer to the fast-growing economies of Brazil, Russia, India and China. The aggregate economic might of the four countries may soon surpass that of the West. According to the International Monetary Fund, the total share of the BRICs in world GDP has been growing fast: from 8 percent in 2000 to 12 percent in 2007. The Goldman Sachs report, entitled "Dreaming With BRICs: The Path to 2050," said that economically the four nations complement each other very well: China and India have strong light industries, while Russia and Brazil can become the main suppliers of raw materials for them. At first, however, all these considerations were purely theoretical.

Unexpectedly for many, the four countries accepted O'Neill's term and decided that they really had common interests and reasons to coordinate their efforts. In May 2008, Russia's Yekaterinburg hosted the first meeting of the BRIC foreign ministers, while the first meeting of the BRIC finance ministers was held in November in Sao Paulo, Brazil. The forums discussed various international issues, including joint efforts to overcome the crisis. The top leaders of the four nations met for the first time on the margin of a G8 summit in July 2008 in Japan. And in late November, Russian President Dmitry Medvedev, while on a visit to Rio de Janeiro, for the first time announced plans to hold a BRIC summit in Russia in July 2009.

Cooperation with other BRIC countries is extremely important to Russia's international interests. They share Russia's vision of a future multipolar world structure. In practical terms, that means these countries would like to see a world that is not dominated by only a single power, but one marked by cooperation between several centers of influence and guided by international law and the charter of the United Nations. Behind the ideal of a multipolar world an obvious reality lies hidden: BRIC countries, as well as several other states, are large enough to have their own interests and their own approaches to the issues of regional and global development. They are not satisfied with a world order completely dominated by a single major power that does not take their interests into account. However, they are generally satisfied with the post-World War II world structure with its system of international law in which the U.N. Security Council is the highest authority.

The first BRIC summit in Ekaterinburg in Russia in mid-June 2009 was naturally mostly devoted to fighting world financial crisis. According to the Joint Statement of the BRIC Countries' Leaders stressed the central role played by the G20 Summits in dealing with the financial crisis, called upon all states and relevant international bodies to act vigorously to implement the decisions adopted at the G20 Summit in London on April 2, 2009. They pledged to cooperate closely among themselves and with other partners to ensure further progress of collective action at the next meetings of G20. The BRIC leaders also stressed their commitment advance

the reform of international financial institutions, so as to reflect changes in the global economy, since in their view, the emerging and developing economies must have greater voice and representation in international financial institutions, whose heads and executives should be appointed through an open, transparent, and merit-based selection process. They expressed belief that there was a strong need for a stable, predictable and more diversified international monetary system. According to the BRIC leaders, a reformed financial and economic architecture should be based on the following principles:

- democratic and transparent decision-making and implementation process at the international financial organisations;
- solid legal basis;
- compatibility of activities of effective national regulatory institutions and international standard-setting bodies;
- strengthening of risk management and supervisory practices.

The BRIC leaders recognized the important role played by international trade and foreign direct investments in the world economic recovery, called upon all parties to work together to improve the international trade and investment environment and urged the international community to keep the multilateral trading system stable, curb trade protectionism, and push for comprehensive and balanced results of the WTO's Doha Development Agenda.

A special emphasis was put on the poorest countries which had been hit hardest by the financial crisis. The BRIC leaders stressed that the international community needed to step up efforts to provide liquid financial resources for these countries. They called the international community to minimize the impact of the crisis on development and ensure the achievement of the Millennium Development Goals and experessed an opinion that the developed countries should fulfill their commitment of 0.7% of Gross National Income for the Official Development Assistance and make further efforts in increasing assistance, debt relief, market access and technology transfer for developing countries. They also agreed that the implementation of the concept of sustainable development, comprising, inter alia, the Rio Declaration, Agenda for the 21st Century and multilateral environmental agreements, should be a major vector in the change of paradigm of economic development.

Interestingly, while cooperation with G-20 was especially emphasized in all the BRIC summit documents, G-8 was not even mentioned. These and other statements of the BRIC leaders showed that they tend to position the group as an influential decision-making center within G-20 which would create an alternative to G-8 and represent the interests of the developing world and influential non-Western powers.

The BRICs have all chances to become the most influential of all the international associations that include Russia, as it is a center for harmonizing the interests of major non-Western centers of the multipolar world. An evolution of the BRIC structure into an alternative to the G8 would meet Russian interests (as well as the interests of India, China and other large countries not included in Western structures).

First, such a project, as distinct from a possible expansion of the G8 to a G20, would not look like the inclusion of developing countries by "seniors" in an already existing structure at their own discretion, but would be a new influential platform for discussing global development issues. Its members, which have been kept in the backyard of the G8, would be able to set the rules in the new organization independently. That would show genuine multipolarity, as well as the limited influence of the Western center; and in case a G20 is created, that would help BRIC members to join it on basically new terms.

Second, Russia – as the only state that is a member of both the G8 and the BRICs – would find itself in a uniquely advantageous position of coordinator and mediator between Western and non-Western centers of a multipolar world.

Transforming the BRICs into an alternative to the G8 requires taking the following measures, using the experience of cooperation within the RIC:

- intensifying the agenda;
- working towards the institutionalization of the BRICs and the creation of a formal mechanism for negotiations and discussions (regular meetings of the heads of state, ministers, etc.), with a view to establishing an international organization in the future;
- considering a possible expansion of the BRICs by including states that usually participate in meetings on the margins of G8 summits and that represent various parts of the world (Mexico, Egypt, Indonesia, South Africa);
- establishing a BRIC permanent Secretariat. The best venue for such a Secretariat would be Macau: a city which sits on China's territory, has a strong tradition of Portuguese speaking and which used to be governed from India. Thus, in this truly international city people from most BRIC countries feel at home.

The agenda of discussions should include pressing issues of today's world: the reform of international institutions, international security issues, including energy security, and climate change. Particular importance should be attached to the search for ways to overcome the global financial crisis. In this context, discussions within the BRIC format could naturally include subjects like comparative analysis of development models in various participating states (and other non-Western models), their positive and negative aspects in light of the present crisis (for example, the Chinese export model and the Indian model which is more oriented to domestic consumption),

as well as sharing experiences of anti-crisis management.

The operation of the BRICs as an emerging international structure must be provided with scientific and expert support, and Track II interaction within the BRICs must be developed. Most appropriate in this context was an initiative to establish a Public Forum in the BRICs. This forum could find it useful to use the experience of the creation of the SCO Forum.

BRIC: WORKING FOR COMMON SECURITY AGENDA

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The presentation is composed of five thematic parts directly related to the notion of BRIC's common security agenda: principal megatrends of global development; tentative role of BRIC in the contemporary world and factors objectively uniting these four megasocieties; the idea of geopolitics shaping the BRIC common security initiatives; the role of intellectuals in our common future.

It has been known since the late 80s of the previous century, that the great transformation of the world is taking place, a transformation that remains poorly understood. Quite recently, Fareed Zakaria summed up three tectonic power shifts over the last five hundred years and made them intellectually accessible for the general public. These shifts are as follows:

1. The rise of the Western world, a process that began in the 15th century and accelerated dramatically in the late eighteen century. Alongside with the first industrial revolution, it produced the prolonged economic and political dominance of the nations of the West.
2. The rise of the United States, which took place in the closing years of the nineteenth century. For the last twenty years, this dominance has been unrivalled and unchallenged, a phenomenon unprecedented in modern history.
3. The actual tectonic change of the modern era could be tentatively addressed as the "rise of the rest". (This shift originating in the 1980s gave birth to the family of "new influentials", namely Brazil, Argentina, Venezuela, Nigeria, Egypt, South Africa, India, etc. that had serious controversies with both the United States and the Soviet Union. Later, the geoeconomic and geopolitical self-assertion of this group was naturally eclipsed by the dismemberment of the Soviet Union and disintegration of the "world socialist system"). This growth has been most visible in Asia but is no longer confined to it.

In fact, Fareed Zakaria repeats the argument articulated in the Soviet development studies in the early 1980s : the new international system is being created in which countries in all parts of the world are no longer objects or observers but players in their own right. "It is the birth of a truly global order."

In many dimensions- industrial, financial, educational, social, cultural- the distribution of power is shifting, moving away from American dominance. "That does not mean,- F. Zakaria argues,- we are entering an anti- American world. But we are moving into a post-American world, one defined and directed from many places and by many people."

Brazil, Russia, India and China are sometimes regarded as "superlarge entities". These entities are united, structurally and institutionally, by a number of characteristics; I will single out the three of them. Firstly, one can distinguish three subsystems of the forces of production simultaneously existing in these mega-societies:

traditional, or pre-and early industrial; industrial segments; clusters shaped by Revolution in Science and Technology. Secondly, I'd like also to address and reiterate the notion of uneven development and its implications for Development. Indira Gandhi, one of the most outstanding political leaders of the previous century, once remarked that "India is not a backward country- it is an unevenly developed society." This very unevenness, alongside with socio-economic controversies and disparities, constitutes a huge potential for growth and development. Development, to my mind, is synonymous with industrial articulated economic growth plus maximal employment (to prevent social turmoil) plus minimization of social disparities (or, to use the rhetorical figure of Indian social science discourse, " growth with equity").

The contemporary world politics, in the final analysis, shapes national long-term foreign policy strategies. Today, many key actors in the area of world politics, Brazil, Russia, India and China included, have opted for "soft power" approach. "Soft power" projection ultimately means the efficiency of knowledge-based economy. At the same time, "hard power" is considered as a means of last resort. Developing this argument a little bit further, "soft power" is the domain of economics (trade plus technology transfer) and of tolerant diplomacy, and of culture, nowadays addressed as "cultural globalization". Quoting the eminent historian and sociologist, John A. Hall, "soft power" is the political equivalent of the "organic state", i.e. involves building a viable nation-state or state-nation.

Strategy, as is known, presupposes change, flexibility and creative handling of geoeconomic and geopolitical puzzles. Putting this agenda in a slightly more tangible form for Brazil, Russia, India and China, coherent long- term strategy is not to be based on ossified convictions in a fast changing international environment. Our countries have, first and foremost, something in common in the field of geopolitics. Evidently, the point of departure here is our strategic goals and perspectives within the international system.

First is maintaining a "realistically designed" polycentric international system based on the pillars of "non-truncated" globalization and genuinely interdependent humanity no longer living separate lives in separate continents, regions and localities. This mode of thinking calls for strengthening not weakening global institutions and responsibilities, the United Nations in particular. It is common knowledge nowadays that the *unipole* is diminishing and the world order is to be efficiently maintained. To develop this argument a little bit further, the BRIC's historic and global role is ultimately dependent on the ability of our four countries to emerge, collectively, as a new "pillar" of the coming world system.

Second is the adequate understanding of the nature of 21st politics: "traditional" paradigms like *Weltpolitik* and *Realpolitik* are progressively becoming obsolete. These and other outdated concepts are being substituted, for example, by the "loose geometry" paradigm exposed to bi- and multilateral compromise.

Third, the new, "multipolar" paradigm will probably take no less than 5-7 years to materialize. The polycentric world of the nearest future will, in my humble opinion, be composed of the seven "centres of gravitation", namely (from West to East): Brazil, the United States of America, Western Europe, Russia, India, China and Japan. For the coming decade or so, these nations are expected to acquire the responsibility for rebuilding stronger UN system and also for restoring planetary environment security charter as well as for making globalization "work" for the humankind at large, introducing principles of "fair play" into WTO, pacifying widespread global discontent and disorder, checking terrorism, piracy and drug trafficking, defending food and energy security for the weakest, and so on.

Under the present unfavourable crisis conditions, Brazil, Russia, China and India could emerge as a collective "driving force" for the world economy. The reason is as simple as that: the more rapid and sustainable the development of non-Western megaeconomies the more reliable are the factors to support global demand. Some economic analysts assert: the growing economic capacity of BRIC creates opportunities rather than dangers (the "Chinese expansionism", Russia's "imperial reassertion", and the like).

According to Western forecasts, the most essential goals of the BRIC nations is to increase their respective GDPs substantially by the mid-21st century. This strategy will definitely require Brazil, Russia, India and China to continue focusing on their economies having also in mind modernization and diversification. This modernization drive will have inevitable repercussions for world development.

The international system is changing in a non-stop fashion. The Asia-Pacific and Latin America demonstrate a complex and multifactor scenario. Nowadays, there is more "articulated" focus on evolving cooperative strategies within and by the international community. Also indispensable for world stability will be the conscious promotion of "soft power" and creative diplomacy in all the "controversial" spaces. Hopefully, it is a choice Brazil, Russia, India and China will need to make with all the faculties intact.

What is the geoeconomic and geopolitical essence of the "common security agenda" for the BRIC? I will outline a number of points relating to this vital issue.

Firstly, "superlarge entities" like our countries are objectively doomed to emerge as a second "pillar" in the world system, apart from the "triad" of globalization, namely the United States, Western Europe and Japan. The pivotal role of the BRIC is dictated by the uncertainty in the international system created by the deconstruction of the bipolar and, subsequently, of the unipolar world.

Secondly, the BRIC countries can effectively work for the international economic security agenda. Collaboration of this type could be instrumental in promoting economic and financial stability

under the continuing global crisis and paradigm “shift” in the international system (the demise of the West alongside with the self-assertion of non-Western societies).

Thirdly, the contours of the “ post-American “ world system are getting clearer. However, the lesson learnt from the bipolar and unipolar epochs is that the stability of the international system also requires the proactive existence of the so called “second league” consisting of sufficiently strong regional leaders. The “regional centres of power” had been a hot issue in the political science discourse in the 1970-1980s, but their time of historical relevance is coming only these days when the global political system needs long-term stabilization mechanisms. The process of the self-assertion of regional leaders became particularly fast-paced in the last 2-3 years. So, working for common security agenda the BRIC countries are involuntarily generating a powerful “demonstration effect” among other states, “new regional leaders” in particular. It goes without saying that the countries of the “second echelon” like Iran, Turkey, Venezuela, Argentina, South Africa, Egypt, Nigeria to mention just a few are vitally interested in coming of a new and equitable world order.

Encouraged by the exceptional role of the late Walt W. Rostow in the social science research, I would like to introduce one of his innovative concepts into the BRIC international agenda. According to the outstanding scholar, “the notion of the U.S. as a super-power has been an illusion since 1948 at least (when the Soviet version of atomic bomb was invented and then tested- A.V.). It is progressively becoming more of an illusion. The United States does represent a significant margin of power and influence when it both expresses the majority will and is prepared to back its rhetoric with action. If the United States seeks to do something which runs against the grain of majority thought and feeling in the world, it can be easily frustrated. We are, in short, the world’s critical margin. There is no other contemporary power that can now perform the role of critical margin.” Here, the key concept is the “power of critical margin”. Today, when the cast of genuine players in the domain of world politics drastically expanded, Brazil, Russia, India and China are destined to acquire the responsibility of maintaining the stability of the international system in the troublesome period of inter-stage transition. The notion of the “power of critical margin” under the new geopolitical circumstances is best illustrated by the words of India’s Prime Minister, Dr Manmohan Singh : “ Efficient politics of national security suggest having cooperative, constructive and mutually advantageous relations with leading world powers… As a nation we are conceptually interested in having a world system based on law and rules but in no way on deals.” Putting it differently, the idea here is to attain an evolutionary transition from one form of the world order to another, built around the principles of compromise and mutual respect for the interests of the “others.”

Nevertheless, BRIC still has time to materialize economically, financially and geopolitically. What, then, are the impediments to the complete integration of the four super-large entities? In my view, Brazil and China have emerged as leaders of integration whilst India and Russia remain full of hesitations. Reasons for this state of things are quite simple: the Indian elites still feel uneasy about the rapid economic growth of China and its tentative geopolitical projections in South Asia; also, the memories of the 1962 bilateral conflict persist in the public opinion. As to Russia, the country’s elites continue to think over the national foreign policy priorities. In my understanding, the present systemic crisis will be instrumental in proper balancing Russia’s foreign policy. In this context, it is important that the global geoeconomic transition increasingly influences the American geopolitical thinking: many of the US political scientists note a shift from the trans-Atlantic to the trans-Pacific strategic priorities in the US international politics. This shift is economically explainable: the Pacific coast states (“sub-economies”) contribute most to the US GDP growth.

In my humble opinion, BRIC is not only a political issue. It is a fundamental intellectual problem. BRIC may be treated as a challenging project that should be elaborated by the best intellectual talent of the four countries. That is why my suggestion runs as follows: to institute the BRIC research centre, and the best imaginable venue is Macau.

BRIC TODAY AND TOMORROW: OPPORTUNITIES AND PROSPECTS

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The first decade of the third millennium has witnessed the formation of newly forged associations, a substantial growth of regional organizations, an upsurge in their activity and also their adaptability to globalization processes. A keen interest to participate in such regional alliances has been displayed by nations exemplifying diverse structural systems, various economic calibers and versatile natural, economic, human and military potentials, among them both developed and developing states, great powers and superpowers, neighboring and contiguous states and those located on different continents (India-Brazil-South Africa, Brazil-Russia-India-China). A phenomenon has been observed, when one and the same state has become a member of one or several regional and sub-regional organizations as well as non-institutionalized groups.

According to Indian think tanks, the centerpiece of world development has been gradually shifting to the East, whereas the newly emerging economic and strategic coalitions tend to make progress in accordance with their own logic.

Academician Yevgeny Primakov, when he held the office of Russia's Foreign Minister, emphasized the tenet of multipolarity as a key component underlying the external policy doctrine. It was during his official visit to Brazil in 1997, when he initiated an upgrade of Russian-Brazilian relationships into the category of strategic partnership, and encouraged the creation of a top level bilateral committee on cooperation co-chaired by the two countries' second ranking officials[1]. Much to our regret, such plans and their implementation were neglected in the 1990-s, and there was no follow-up in either diplomatic or science arena. In New Delhi, in 1998, Primakov highlighted the triangle Russia-India-China, which was, in part, an ideological retaliation for the NATO expansion eastwards and also an alternative to the external policies pursued by his predecessor A.Kozyrev. At that time, however, it was not reasonable to underestimate the existing controversy between India and China related to the border demarcation and Tibetan issues.

After the US investment bank Goldman&Sachs published on 1 October 2003 a report by its analysts D.Wilson and R.Purushothaman entitled Global Economics Paper No:99 Dreaming With BRICs: The Path to 2050, the acronym BRIC coined by them has been widely accepted internationally to denote Brazil, Russia, India and China collectively, as a group of countries forecast to become the leading world powers within the next forty years, as asserted by the report authors. By the year 2050, according to their estimate, the BRICs GDP size will be split as follows: China – US$ 44.45 trillion, India – US$ 27.8 trillion, Brazil – US$ 6.07 trillion, Russia – US$ 5.58 trillion.

In 2005, the Goldman&Sachs analysts produced another report under the title How Solid Are the BRICs?,[2] in which they conceded that having released the first report, they had been repeatedly confronted with one and the same question: Why just Brazil, Russia, India and China? The authors responded that due to the impressive

magnitude of those countries they could capitalize on the potential growth opportunities that would allow them to play a key role in the international affairs. Besides, they appear to meet certain criteria: the most heavily populated countries in the world – China and India – have demonstrated the highest rates of economic development. Russia and Brazil along with China and India are predicted to be in the very center of global economic processes and will be the most attractive economies for foreign investment. The Goldman&Sachs analysts also maintain that under favorable circumstances China could become the largest economy in the world by 2041, whereas India would be the world's third largest economy by 2035[3].

Two years after the BRIC thesis was conceived, its authors, as have been acknowledged by themselves, grew even more convinced of their adequate thinking: optimal economic strategies can only be adopted with reference to the interests of the four BRIC countries, who have been demonstrating higher growth rates than initially projected. While the first paper carried an assumption that by the end of the current decade the combined BRICs share in the global GDP would be 10 percent, the latest paper in the series states that, based on the 2007 performance, their share has already reached 15 percent. Meanwhile, the authors of the 2007 forecast, going into greater detail, present the following data: over the six years capitalization in Brazil has increased by 369 percent, in Russia – by 630 percent, in India – by 499 percent, and China – by 201 percent, exceeding by far the indices of the old centers[4].

The BRIC countries (perhaps, with the exception of Russia) have dealt with the global financial debacle in a manner that incurred less losses for them to bear than in the case with the entire world financial system, and, according to the Indian experts, the BRICs, being the primary driving force of the world economic progress, contribute a lot to the capability to overcome the ongoing crisis.

As the BRICs economies continued to grow stronger against the backdrop of global economic processes, the tendency for the BRICs to identify common approaches to tackling major international development problems started to shape and gain ground. The issues underlying convergence or divergence of interests came to the surface, and prospects for synchronizing their efforts in response to the economic and financial challenges representing the world crisis repercussions appeared to be under close investigation.

Guidelines to help promote bilateral relations within the BRIC bloc in the foreseeable perspective were also defined, although the question of putting up the BRIC structure formally was never raised. It is worthwhile to mention that the BRICs do not enjoy an absolute coincidence of objectives or interests, they adhere to distinct sets of values and they are the bearers of different civilizations – Iberian-American, Slavic-Orthodox, Hindu-Buddhist and Confucian, but this particular phenomenon can be regarded as a factor that contributes to sustaining the integrity of these nations in our globalize era.

In his address delivered in September, 2002, in Washington, D.C., Brazilian President L.I.L. da Silva said that his country would be striving to find new partners "which would match Brazil in their size and potential – such as Russia, China and India"[5].

In February, 2005, the Brazilian President declared in New Delhi that Brazil and India "should not sit around and wait until their common problems were solved by rich countries", and therefore developing countries should coordinate a "new trade and economic geography of the planet" between themselves[6].

In September, 2006, at the 61st UN General Assembly Session, Russia moved a proposal on the launching of the BRICs contact group meetings at the foreign ministers level that would be primarily geared towards securing an expanded participation in the UN Security Council, WTO, G-8 structures for the BRICs.

The BRIC countries might be instrumental in helping resolve a whole range of global problems. By way of example, let's take the climate change problem. It is a most acute issue for Brazil, the other three countries hold diverging positions on how to deal with it in the years to come, however, joint projects seeking to devise mutually acceptable solutions to it can be one of the areas across the spectrum. Sustainability of energy supplies can be a basic premise for creating a collective platform for the BRICs to help stabilize the energy market globally and regionally, bearing in mind that Russia is the largest producer of energy carriers, China and India are the biggest energy consumers, and Brazil has stepped up its efforts to build up an alternative energy infrastructure. Also, a topic for discussion could be nuclear non-proliferation, although, as is well known, there is a discrepancy of views among the BRICs on this issue. All the four states are confronted with problems associated with drugs and organized crime, which cannot be overlooked during gatherings of the BRIC representatives.

A high priority within the system of BRIC integration is attached to economic and financial policymaking, particularly in connection with the persisting global crisis, which has revealed that the holistic management of the world economy is on the decline. The mutual agenda can include joint work to design an "alternative model for further development" based on multipolarity, balanced economic and trade growth and energy conservationism principles.

The BRIC states are advocating for democratization of the international financial system and financial institutions, and such a process is regarded as a prerequisite for the establishment of a multipolar world order. India views the BRICs as a factor of economic growth and increased stability, it considers expedient to intensify bilateral collaboration within the BRIC format with the aim of formulating a "collective stance" with regard to major global problems.

One of the Big Four auditors in the world, KPMG, conducted in July, 2009, a survey of the BRICs economic environment, in which 1,800 manufacturing companies from Brazil, Russia, India and China were polled[7]. The findings of the poll, in contrast to the one held in January, indicated a return to the pre-crisis level of entrepreneurial confidence that was in evidence as of July, 2008. A certain degree of optimism is underpinned by an anticipated growth in demand and improvement in the economic conditions to stimulate business. The chart below shows the confidence balances for business activity –confidence is highest in Brazil, firms in Russian and China also predict robust rates of expansion, while Indian firms are much less upbeat than their counterparts elsewhere.

	BRIC	Brasil	Russia	India	China
July-2008	+47.0	+65.3	+63.2	+62.9	+.36.3
January2009	+3.6	-3.0	+21.6	-1.6	+2.6
July 2009	+46.5	+64.9	+49.7	+22.5	+46.7

Source: Yermachenkov Igor (Finam.ru). Optimistic Moods Returns to BRIC Countries (In Russian). 10.08.2009

Trade and economic relations clearly constitute a key factor in forging and consolidating better interaction among the BRIC countries. At the present time, we are referring to bilateral trade exchanges between the BRICs exclusively, as we do not possess such data that would reflect any realistic tripartite or quadruple cooperation deals.

The trade turnover between Brazil and India throughout 2002-2006 has risen twice as against the previous decade and reached US$ 2.3 billion[8].

In 2006, the Brazilian exports to the People's Republic of China stood at US$ 8.3 billion, whereas the gross trade turnover was US$ 16.3 billion. China is the third largest trading partner for Brazil following the US and Argentina, the Chinese-Brazilian turnover increased by 34.5% in 2006 as against the previous year. On the basis of the 2007 trade figures, China has moved to the second spot in the Brazilian turnover, being a purchaser of Brazilian oil, ethanol and biodiesel. During a visit to Brazil in 2004, Chinese President Hu Jintao said that Brazil was "a door for Chinese investment to Latin American countries", where China plans to invest up to US$ 100 billion over the next ten years. As Brazilian economists believe, "affluent China, whose vast population is able to purchase Brazilian foodstuffs and clothing, electronics, motor vehicles, minerals and energy carriers in ever increasing amount is an immense blessing for our country."[9]

In 2007, the volume of Russian-Brazilian commerce was US$ 3.5 billion, by 2010 it is expected to reach US$ 10 billion. The regulatory framework in place is conducive to this process. A favorable political context has been reaffirmed in an official communiqué issued upon the results of the December, 2006, visit to Brazil of Russian Foreign Minister S. Lavrov[10].

At the same time, the perception of the analytical community is that Russian-Brazilian cooperation is so far stalled in its "traditional" phase. The bilateral turnover fails to correspond to the developmental level of their economies, deals tend to be made on a sporadic basis, bureaucratization, excessive declarativity and inertia are prevalent, while the scope of reciprocal investment is extremely low. By the end of 2007, the list of joint Russian-Brazilian ventures included only one company – Sadia, specializing on poultry production, and featuring a 60% Brazilian ownership. TechnoPromExport and AvtoVAZ were planning to invest US$ 350 million in the development of energy generating facilities and a railway network structure in northern and north-eastern states of Brazil. Nevertheless, the volume of Russian-Brazilian commercial exchanges is incommensurable with the figures reflecting Brazil interaction with China or India[11].

Trade and economic relations between Russia and India is the segment of their business collaboration that has been most severely affected by the disintegration of the USSR, and that has not fully recovered from that crisis until now. The USSR share in the Soviet-Indian turnover was almost 70%, and its value as of the time of the USSR break-up was US$ 5.5 billion in 2002-2003 period, the turnover was around US$ 1.3 billion. It is planned to increase the turnover at least to US$ 10 billion. Currently, it approaches US$ 8 billion[12].

The commodity structure of bilateral trade reflects neither the present market conditions, nor the production, science and technology potential of both countries. The crucial industries for Russia and India, that are the backbone of their economies, with the highest concentration and application rate of cutting-edge R&D innovations and state-of-the-art technologies, are involved in the bilateral exchange on a very limited basis. The share of high-tech general machinery and heavy engineering products is less than 8%.

The suggestions advanced by India's Chambers of Commerce and Industry with a view to improving national policymaking with respect to Russia provide for an expanded product range, increased supplies of low-cost pharmaceuticals, high-tech industrial products, cable and electro technical equipment, household electronics, office machines and goods manufactured under western licenses.

Meanwhile, products capable of being competitive on the Russian market include textiles, knitwear, handicrafts, pharmaceuticals, cosmetics, wool and woolens, leather goods, readymade clothing, foodstuffs, jewelry and precious stones. Russian consumers

have a distrustful attitude towards Indian computer software and electronics, industrial and electronic equipment, automotive spares. Russian consumers will have to abandon their prejudices against the modern Indian industry that has already captured international markets, including those of industrialized nations.

The volume of Russian-Chinese commerce in 2008 reached US$ 33.38 billion (US$ 17.55 billion – Russian exports to China, and US$ 15.83 billion – Russian imports from China). In 2008, the turnover between China and Russia was US$ 56.8 billion (up 31.8%)13. And for the first time ever, the Chinese exports to Russia significantly exceeded its imports from Russia that stood at US$ 28.49 billion and US$ 19.68 billion respectively.

Trade between China and India has experienced a dynamic growth, its volume increased in 2006 by a third as compared to 2005, having reached US$ 24.86 billion (US$ 14.58 billion – Chinese exports to India, and US$ 10.28 billion – Chinese imports from India). Trade between China and India in 2007 grew by 55.5% to reach US$ 38.65 billion (24.02 billion – Chinese exports, and 14.63 billion – Chinese imports)14. In 2008 Indian import from China reached US$ 31.5 billion, Indian Export to China – US$ 20.3 billion, turnover – 51.8 billion[15].

As for further advancement of trade and economic relations among the BRICs, their collaborative propensity has not yet developed into fully-fledged partnership, as a truly full-value partnership in the XXI century implies cooperating in high-tech industries. China and Brazil have come to the realization of that objective most closely among the BRICs, they have been cooperating on a large scale in such sectors as space research, joint manufacture of aircraft and motor vehicles, and are planning to collaborate in the development of renewable energy sources with the employment of Brazilian ethanol and biodiesel, also in biotechnologies and pharmaceuticals, peaceful use of nuclear power. Brazil and India are developing joint projects in metallurgy, oil production, motor car and aircraft manufacture, research effort is underway in defense industry. However, escalating competition between Brazil and India cannot be ruled out on the markets for ethanol, in computer software, metallurgy, defense industry and other sectors, if adequate long-term strategies for both countries are not engineered and put into place on commodity and service markets.

The global financial crunch has not left the BRIC and RIC countries unaffected. Nevertheless, their impressive domestic markets, diversified commodity and geography structure of foreign trade, substantial investment reserves carried over from the preceding period allow to adopt a definitively optimistic outlook towards the chances of overcoming the crisis phase in the world economic development for China, India and with some reservation, Russia. Although their growth rates are getting lower, these countries, as the Russian expert, Pr. V. Portyakov believes, “along with Brazil will retain the role of a locomotive in global growth, which will enable to protect the world economy at large from sliding into recession.”[16] The view that “the BRICs will not be so hard hit by the financial crisis” is held by Amb. Dilip Lahiri, Distinguished Fellow at India’s Observer Research Foundation[17].

Simultaneously, experts have expressed an opinion that a 5.6% Russia’s GDP drop in 2009 and a 10.9% drop as against the first quarter of 2008 is the worst indicator among the BRICs economies. And one of the reasons underlying Russia’s lagging behind others is its dependence on raw exports, which is only getting stronger[18].

Against the backdrop of the current global financial downturn, the BRICs are offering their co-produced options of reforming the world financial system. It is contemplated therein to reform such international institutions as the International Monetary Fund (IMF) and the World Bank. The BRICs can agree on a coordinated action plan regarding their strategies within the World Trade Organization (WTO), whereas China, Brazil and India can support Russia in its accession to the WTO. Russia and China raise the question of increasing their quotas in the IMF (quota for China is 3.66%, Russia – 2.69%, India – 1.89%, Brazil – 1.38%, US – 16.77%), and expanding the range of reserve currencies19. A common stance can be adopted in regard to the WTO Doha round on the protectionism in the agricultural sector.

The BRIC countries are developing plans to invest part of their foreign exchange and gold reserves into the IMF debt securities. On June 10, 2009, Russia and Brazil announced their plans to purchase IMF bonds to the tune of US$ 20 billion, China plans to invest a total of US$ 50 billion, and India plans to join their initiative. Goldman & Sachs experts believe that the BRICs have indicated that they belong to the Premier League. The intend to buy IMF bonds not for the sake of diversifying their reserves, but for the sake of securing a more substantial weight on the world markets for themselves20.

In June, 2009, after a series of meetings among the BRICs foreign ministers, the first summit of the BRIC leaders was held in the Russian city of Yekaterinburg. The BRIC summit coincided with the Shanghai Cooperation Organization (SCO) summit, attended by both SCO members and observers, the fact that prompted Indian Prime Minister Manmohan Singh to participate in both summit meetings (last year, India was represented at the SCO conference by the Minister for Petroleum and Natural Gas, Mr. Deora) .

The BRIC leaders spoke in favor of reforming the UN and upheld Indian and Brazilian striving to play a more efficacious part in the UN Security Council. They advocated for the establishment of a more democratic and equitable world order, founded on the rule of international law, equality, mutual respect and cooperation. Issues relating to food and energy security were also discussed, and an agreement envisaging closer collaboration at the level of Finance Ministries and Central Banks was reached. A joint statement issued on 16 June contained 16 political sections and also a plea to redesign

the world financial architecture. The decision to press ahead with the requirement of obtaining more voting rights with the international financial institutions was reaffirmed, the commitment to work on a diversified currency system was reiterated and the necessity of providing aid to the developing countries, which have been most severely affected by the financial debacle, was underlined. The document carried no anti-dollar provisions, as a substantial part of foreign exchange and gold reserves, with a total worth of US$ 2.8 trillion, has been invested in the US Treasury bonds. According to the opinion of some analysts, the resolutions of the Yekaterinburg summit testified to the formation of a new political bloc[21].

The mere fact that the four nations with conspicuous differences have forged such a group does not mean that there in no controversy or discrepancy among them, that can restrict their possibilities for joint interaction.

India and China have suffered to a greater extent from the slower rates of global development; Brazil has been affected to a less degree. There is a considerable variety in the structure of the BRICs economies. Russia and Brazil, who generate substantial revenue from the sales of their energy resources and other products, are interested in the rising prices for such export items. In contrast to them, India and China, who are becoming consumers of such products on an increasing basis, are interested in the lower prices for energy resources. This factor is restricting the possibility for the BRICs to agree on mutually acceptable oil and gas prices. There are noticeable differences in their attitude towards the United States. Russia is known for its outspoken criticism of the US external and economic policies; Brazil and China, who are more integrated into the American economy, tend to act more cautiously. Relationships between India and the US have been considerably more vigorous over the recent period, and for this reason India is not willing to participate in any coalitions based on anti-American sentiments.

There is a divergence of views on the problem of endorsing a substitute for the dollar as a world reserve currency. Russia has taken a more aggressive stance in trying to promote the establishment of a new supranational currency. China is not likely to go along this line, as its finances are substantially linked to the dollar system. The Brazilian government, overall, is supportive of the idea of weakening the position of the dollar as a reserve currency, rather with intent to demonstrate its solidarity with China and Russia than to advance any concrete proposals to this end. India thus far has shown no interest in discussing this particular issue, and as a result it appears problematic to formulate a coherent joint stance for the BRICs on that score.

As a matter of fact, the long-standing spirit of competitiveness existing among the BRICs cannot be underestimated either.

This is especially relevant to the relations between India and China, traditional rivals, although “natural strategic partners”, whose collaboration is still overburdened with inveterate, unsolved problems. One of these states is a nuclear power de jure, while the other only de facto so far. The question whether India can trust China unconditionally still features prominently on the agenda, and getting an answer to it constitutes the essence and purpose of bilateral negotiations underway.

There are problems in Indian-Chinese relations awaiting their solution. First of all, it is their unsettled territorial dispute, that has been “kept in limbo” for a while.

As a result of implementing agreements on confidence building measures, over the last decade the situation along the Indian-Chinese border remains “almost peaceful”, despite the fact that it does not yet have an irreversible nature. From time to time, China lays claims to territories, regarded by India as its own, - and this is a total area of 134 thousand sq. km in the region of Aksai Chin in Ladakh and the Indian state of Arunachal Pradesh, which, as asserted from time to time by the Chinese side, belongs to China[22].

In the territorial dispute with China, India considers itself as the adversely affected party and continues to adhere to the standpoint that China has seized part of its territory. However, there is not much likelihood that Beijing will return these territories voluntarily. Consequently, in the near future it is conceivable to retain the status quo along the frontier, and the confidence building agreements enacted between the two states with the aim of respecting the Line of Actual Control create the required groundwork for that.

A serious bone of contention in the Indian-Chinese relations remains the problem of Tibet. India is concerned over dynamic progress in the highway construction in Tibet to link Lhasa to the internal China’s provinces, also the supply of military personnel and equipment there and the building up of new settlements for ethnic Khans in the areas adjacent to the Cease-Fire Line. India has been always consistent in its acknowledgement of Tibet as an integral part of China, the Dalai Lama is considered to be the religious leader of the Tibetan people and he is permitted to administer only such practices on the Indian Territory, that are in accordance with such capacity[23].

Apart from that, New Delhi is much more concerned with the ongoing military and political dialogue between China and Pakistan. The Chinese leadership maintains that their cooperative activity cannot be regarded as being spearheaded against India’s interests, and that the “Indian factor” is excluded from the framework of Pakistani-Chinese relationships, and that China is developing its relations with India and Pakistan separately, as isolated endeavors.

The Pakistani-Chinese collaboration is seen in India with a particularly high degree of apprehension and mistrustfulness. Therefore, normalization of Indian-Chinese relations, that would have an irreversible character, is feasible only on condition that the Pakistani-Chinese contacts are reduced in scope, primarily with respect to the nuclear missile technologies.

Notwithstanding any circumstances, in the not too distant future, the impact of the BRICs on the activity of world financial and political institutions is expected to be strengthened, their economies will be critical to the global GDP growth, and as a result, their political clout will increase also. More specifically, the resolutions of the BRICs Finance Ministers meeting held in London on September 4, 2009, ahead of the G-20 Finance Ministers meeting, bore testimony to that. A decision was taken to invest US$ 80 billion in the IMF bonds. China will be committed to invest US$ 50 billion, Russia, India and China – to US$ 10 billion each24.

At the international conference to protect competition held in Kazan, in early September, 2009, under the BRICs auspices, and attended by over 40 antimonopoly agencies worldwide, the BRIC representatives signed a joint declaration on cooperative actions to facilitate and promote competition. They agreed to join forces in fighting cartel schemes and use the BRICs internet portal for information purposes to raise public awareness25.

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REVISITING THE IMF: NEED FOR A NEW GLOBAL FINANCIAL ARCHITECTURE

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The current global financial crisis has once again raised serious doubts and misgivings about the efficacy and the legitimacy of the international financial institutions (IFIs) such as importantly the International Monetary Fund (IMF). A majority of the member countries are wary of the policies and practices of the IMF. Whatever be the antecedents of the current financial crisis—be it, as some attribute, to the periodic 'boom-bust' cycle (Perez, 2009) or, something more systemic resulting from the neo-liberal initiatives to create a 'capitalism without compulsions' (Palma, 2009)—the current crisis has laid bare in digital details the built-in lacunae and limitations of IFIs in dealing with global/regional economic crises (Blankenburg and Palma, 2009: 534).

In turn, this has further triggered the debate both in the developed and developing countries on the functioning of the IFIs. A range of questions have surfaced regarding the IMF such as whether the Fund has outlived its usefulness; has it done more harm than good to the global financial architecture; and therefore, whether at all the Fund is equipped adequately to deal with financial crises of the sort that are virtually certain to occur in the future. Related to these questions are others, chief among them are whether therefore the IMF need to be reformed to address the new realities of the contemporary global economy or fundamentally restructured or replaced by some other global institution; is it possible for regional financial institutions to supplant the IMF as a regulator of global finance; and what kind of an initiative can the developing countries take in order to create an effective substitute of the IMF to cater to the specific needs of the developing countries.

It is against this background an attempt is made in this paper to revisit the IMF and examine at length some of the afore-mentioned questions. In doing so, an effort is made to delineate the evolution of the IMF, highlight its policies and practices since its inception and identify areas in which its role over the years has become irrelevant if not counter-productive in dealing with the contemporary global financial architecture. Finally, the presentation purports to suggest the lines on which the institution needs to be restructured in order that its efficacy and legitimacy is enhanced.

EVOLUTION AND THE CHANGING STRUCTURE OF THE IMF

Known as one of the more robust of the Bretton Woods twins, the International Monetary Fund was established in 1944 along with the International Bank of Reconstruction and Development (IBRD)/World Bank). The Fund was meant to govern and support the international monetary system in the post-Second World War world. Its basic mandate was to "oversee the development of the international monetary system in order to ensure its effective operation." [fn: IMF, Articles of Agreement, Article IV (3a)]. In these early years, the Fund's

membership was largely confined to industrialized countries. With the decolonization process gathering momentum in 1960s, and later in 1990s with the disintegration of the Soviet Union, the membership of the Fund dramatically increased. Today there are 185 members. Moreover, in the early years, some major industrial countries drew on the financial resources of the Fund, but none has done so for decades. The result has been a de facto division of the Fund into two groups: the industrial countries, which dominate decision-making, and the developing countries, many of which are the clients of the Fund.

In the early incipient years each member of the Fund was obliged to maintain a fixed exchange rate defined in terms of gold or the U.S. dollar and the Fund provided interim financing to a member facing severe difficulty maintaining its exchange rate. Towards this task each member made financial resources available to the IMF, largely in its own national currency, and received in return the right to receive financial assistance from the Fund as well as the right to vote in its decision-making bodies. This system of fixed exchange rates that was central to the functioning of the Fund collapsed at the start of the 1970s, with the move to floating exchange rates by the major industrial countries. The upshot of it was the amendment to the Articles of Agreement of the Fund. Accordingly, Article IV after amendment permitted each member to adopt the exchange-rate regime it preferred but conferred upon the Fund itself the task of overseeing the international monetary system. It instructed the Fund to exercise "firm surveillance over the exchange rate policies of members" and to "adopt specific principles for the guidance of all members with respect to those policies." [[fn.International Monetary Fund. Articles of Agreement, Article IV (3b)].

Over the years the Fund's membership underwent substantial change. Today most members are developing countries, ranging from large, emerging markets to small, impoverished states. At the same time, the Fund's surveillance of macroeconomic issues has expanded to cover topics with little direct relevance to its mandate. Moreover, though no industrialized country has drawn on the Fund for more than twenty years, such countries still dominate the Fund's decision-making.

Given these anomalies, improving the Fund's governance is doubtless a critical element in enhancing its relevance, legitimacy, and effectiveness. The Fund started some sixty years ago as the guardian of the par value system, with 44 member countries and 12 Executive Directors. Today, as has been stated earlier, the par value system is long gone, and the Fund has one-hundred and eighty-five member countries and 24 Executive Directors. While roles have evolved over time, in many ways the formal structure and many practices remain largely untouched; and reforms have not kept pace with changes in the membership and in the environment in which it operates. These far-reaching developments have greatly expanded functions of the Fund to include programmes and policies which affect a wider range of people, groups, and organizations than before.

GOVERNANCE ISSUE AND THE LIMITS OF ACCOUNTABILITY

It is widely recognized that the Fund's policies especially in the wake of the financial crises in the 1990s have become manifestly intrusive. The part the Fund played in bringing about far-reaching structural reforms in economies of its members through conditional loans increased to a new level of intrusion when it started interfering with governance and judicial reform which affected communities and peoples of member states directly. This was done by various means such as measuring the performance criteria to be eligible for loans, which was increased in the 1990s (to 26 from 6 to 10); the number of programme objectives being included in the loan increased—very different from their initial mandate at the time of their creation, which did not allow them to interfere in the domestic jurisdiction of any state (Kapur, 2001). However, the conditionalities increased over the years especially in the 1980s (in the wake of the debt crisis) and broadened to include good governance, judicial reform, corruption and corporate governance (Woods and Narlikar, 2002). Since this directly affects domestic political and economic arrangements many of the affected groups claim greater accountability of the institutions such as the IMF to them.

For instance in India, instead of protecting casual labour, the IMF programme proposed 'to help the poor' by doing away with the labour laws because they were said to discriminate against the non-unionized labour. However it did not calculate the effect of the New Economic Policy and the phasing out of fertilizer subsidies which was one of the conditionalities of the IMF, on the small and medium sized farmers or labour in rural areas. The rise in food prices (such as rice) resulting from devaluation and removal of food and fertiliser subsidies led to the decline (of more than 60 per cent in the six months period) in the real earnings of handloom workers after the adoption of the IMF programme.

Attempts to increase the accountability and transparency of the IMF through various measures have not been very successful. Traditionally, accountability was ensured by the Constitution and Articles of Agreement (AoA). The AoA laid the boundaries. Under the provisions of AoA each member is represented on the Board of Governors. However, this was not a direct representation for all member countries. While the major countries were represented directly by an Executive Director (US, Germany, France, Japan, UK, Saudi Arabia, Russia and China), other countries were grouped in constituencies who then elected one Executive Director who represented them all. The largest constituency has as many as 24 countries.

In domestic political arena, there is the presence of other agencies like courts that judge the actions and transparency of public officials. This is known as horizontal accountability (Schedler,

Diamond and Plattner, 1999). The IMF has recognized that greater participation by local actors is called for, in order to make both the IMF and the concerned government to account for the policies. To dispense funds the IMF thus demands governments to prepare and submit blue prints on developmental strategies and plans with active participation and involvement of the local actors/civil society. However, involving civil society and non-governmental organizations (NGOs) are not definitive solutions to guarantee civil society participation as it is not only difficult to verify and vouchsafe for the NGOs but even more difficult as in some countries to determine whom these NGOs represent and to whom they are accountable.

TOWARDS REFORMING THE IMF

It is not politically viable to discuss abolishing the IMF. Instead increasing the powers of the IMF is any remedy to refurbish the IMF? Efforts to reform the IMF have so far resulted in stalemate. With the IMF's voting power based on the size of a country's capital subscription, the G-7 countries easily dominate. All purposive initiatives to restructure the institution therefore have been vetoed. The BRIC countries have asked for equitable representation between the advanced and the emerging powers and for greater voice to be given to the emerging powers and the developing countries. In October 2009, at the Joint Annual Discussion India reiterated the need for the IFIs to "enhance their legitimacy to perform their expanded roles and mandates effectively" (Mukherjee, 2009). This meant bringing about changes to the governance structure of the IFIs.

Committee on IMF Governance Reform chaired by Trevor Manuel, the Minister of Finance of South Africa submitted its report on 29 March 2009 in which the discussions on Reform of IMF have centered on the following issues which BRIC has also been actively advocating:

Governance: There are three main areas for discussion here—representation on the Executive Board; realignment of voting shares; and procedures to choose IMF management. On representation on the Executive Board, it has been suggested that the European Union as a whole should get one seat or a maximum of two. This would free more seats for Asian countries on the Executive Board. The issue of voting shares involves reducing the share of industrial countries and increasing share of emerging market countries as a group. IMF's members agreed that the existing quota allocations had become somewhat misaligned from the quota that the members had been allocated at the time of joining IMF because it was based on the size of economies of countries at that time. However, any changes in quotas require approval by an 85 percent majority. It has been suggested that voting shares and quotas could be voluntarily reallocated without increasing the size of the Fund or an increase in the total quota. A decrease in quota of the US, Canada, Japan and European countries would free up quotas for distribution among the 6 large non-European countries: Singapore, Korea, Malaysia, Thailand, China, and Mexico. India believes that there should be a "doubling of quotas" to preserve a "quota-based institution". Parity in vote shares, it is suggested, can be achieved by "a 7 to 8 per cent shift in quota shares" (Mukherjee, 2009). BRIC summit declaration on 16 April 2010 at Brasilia stated that the BRIC countries expected the quota reform of the IMF to be concluded by the G-20 Summit in November 2010. They also called for an open and merit based selection method, irrespective of nationality, for the heading positions of the IMF and the World Bank and reiterated that developing countries should be given preference.

On the question of IMF management, it was suggested that a Managing Director should be appointed by a formal mechanism and that it should not go to the European Union. A list of requirements with a list of candidates and a vetting procedure needs to be developed. The G-20 would be a more appropriate steering committee for this rather than the G-7 with a seat for the European Union. An amendment to the Articles of Agreement that would eliminate appointed chairs, thereby allowing for the consolidation of chairs, including those of EU countries is called for.

Purposive Consultations: The IMF has to discharge its responsibility for identifying and resolving global imbalances or it will become redundant. It has to also find means to increase its influence over systemically important countries today importantly the G-20. It was recommended that the IMF should specifically name countries and their programmes that are not satisfactory. It should increase its surveillance over members—their exchange rate policies and see if they need to be updated. It should have collective consultations with major Asian economies as a group--Hong Kong, China, Japan, Singapore, Thailand, Malaysia, Korea and India. These countries have heavily managed their exchange rate vis-à-vis the US dollar and modifications of the policies of these countries as a group is important.

Role in Financial Crises: The IMF has to play a central role because it is positioned to provide a public good by being able to coordinate. In times of crises, neither the country nor its creditors are able to provide sound information and advise that the IMF can do and avoid anti-social national economic policies. To guide debt renegotiation process, the Fund should make estimates of the amount of financial resources the country can be expected to contribute to external debt service and publicize it. A suggested reform is about changing the principles that prompt Fund lending, and increasing the sums available to be lent. There has to be discrimination between countries that wish to borrow as a defensive mechanism because of events elsewhere, and those that are obliged to go to the Fund

because of their own policy inadequacies. There should be, but is not, ample scope for countries to borrow of their own volition when their shortage of foreign exchange happens through no fault of their own. There are also proposals for easing conditionality faced by countries that have to go to the Fund because of their own inadequate policies.

Engagement with Low Income Countries: Since the IMF's mission is to promote economic stability and growth, low income countries should benefit most. While most low income countries would want all possible help that they can get, the level and intensity of IMF involvement is important. For example, IMF should not be involved in institution building as that is not its forte or area of expertise. IMF can assess the debt-service capacity of the country; give financial advice, surveillance and temporary balance of payments assistance. Another debate is about less involvement of the Fund in Poverty Reduction and Growth Facility like programmes and thus cutback of involvement in Poverty Reduction Strategy Papers. (if that happens it may de facto go to World Bank). G-7 has suggested measures such as the creation of a 'Financial Stability Forum' which did not include developing countries (later criticism led to G-20); and the creation of a contingency credit line which was a fund available to countries that were about to be hit by a crisis. This credit line was however dysfunctional because going for credit itself would be an indication of a looming crisis and result in capital moving away from the country.

ALTERNATIVE

An alternative suggestion has been to dis-empower the IMF—in other words, decentralize its institutional power and have instead a system of pluralistic institutions and organizations guided by broad principles that are flexible in a given situation. This would put checks and balances on the IMF that would be just another actor co-existing with others working along common guidelines.

Creation of regional financial institutions that could co-exist with the IMF and regulate global finance is one possibility. This would help contain a crisis quickly within the region and regional institutions would be better equipped and informed to deal with such crises in a shorter time span. But one such proposal by Tokyo in 1997 to create an Asian Monetary Fund (AMF) to address the problems of the Southeast Asian crisis failed in view of the displeasure of the United States (Altbach, 1997). The IMF Managing Director Michel Camdessus argued that the AMF would undermine the efforts and authority of the IMF to deal with the issue. It was also argued that since the US relied on the IMF to persuade countries in Asia to follow its financial advice, the creation of an AMF would directly affect US role in Asia (Altbach, 1997).

The idea of a regional institution was that it would react rapidly to any difficulty before it turned into a crisis with ready financial liquidity. The loans would be made available without the conditionalities usually required to be fulfilled by the IMF and would be framed in a sustainable development framework which would be sensitive to the peculiar needs of the country. Sensitivity, flexibility and a rapid, less structured response would be the norm then with greater accountability based on their own values.

Another alternative that has been considered is the creation of an International Monetary Fund of the 'South' or of developing countries (Toussaint, 2006). This is an extension of the idea of the regional financial institutions, something that we can see developing in Latin America. There has been in recent years an improvement in the terms of trade of developing countries exporting raw materials and agricultural products with the rise in real price of oil, other raw materials and agricultural products. This has led to the tripling of foreign exchange reserves of developing countries from US $ 973 billion in 2000 to $ 2,679 billion in 2006. China's alone increased by more than five times from US $ 166 billion to $875 billion. (Bank for International Settlements Annual Report 2006). In spite of these reserves, the developing countries lack capital required for development. Instead of using their foreign exchange reserves for investment and current spending on essential areas like education and health, governments in developing countries use it for repaying their debts or for lending to treasuries of United States or Western Europe by purchasing US Treasury bonds. The interest earned from investing in US treasury bonds is less than the interest paid to borrow. They also use foreign exchange reserve as a guarantee on future payment and contract new debts with private foreign banks. The developing countries should use their reserves for productive investment in industry, agriculture, infrastructure, environmental protection, urban development, health care, education and create a pool of common financial institutions.

The argument is that the political economic situation is favourable for developing countries to come together for many reasons—they have high levels of international reserves; the average growth rate in developing countries is high; politically several countries are seeing leftist trends. One also needs to keep in mind, that the developing countries are also dependent on the demand from the West. For instance, the consumption pattern in China is minuscule and so the outlet for Chinese production is the United States. If a reduction in economic activity in the United States is not counterbalanced with strong growth in Europe and Japan, economic activity in China is likely to slow down unless there is a radical turnaround in the model of development by the Chinese authorities.

CONCLUSION: CAN BRICS PLAY A ROLE?

What role can BRIC play in revitalizing the international financial institutions such as the IMF? The G-20 has been criticized for not

being very effective as it is a creation of the G-7 countries. So, can the BRIC assume a leadership role or play a role in creating a more pluralistic atmosphere for decision-making?

The alternatives that were discussed for IMF were largely to have further reforms in the IMF and make it multilateral; to create more regional financial institutions and make the system more plural; or to have another Fund for the South (developing countries). India has been supportive of the first option, namely in support of multilateralism. Having a separate Fund for the South may not be in the spirit of inclusiveness. The developed and developing countries are too involved and enmeshed in today's global world to build notional or real walls. Regional financial institutions too may create more immediate options for countries but it is better to have a common platform for all countries to tackle all problems. Each country is swayed by its domestic imperatives, especially India which is influenced by its various domestic economic and social lobbies operating within a democratic polity.

India along with other BRIC countries has called for changes to the governance structure of the International Financial Institutions (IFIs) to reflect the changing dynamics of the global economy. The growing economic might of these countries need to be recognized. Brazil, China and India despite the recent economic slowdown are fast expanding economies and Russia is a part of the developed world. This gives them additional leverage. India is talking in terms of ratifying the April 2008 package of quota reforms for the Fund at the earliest and has suggested a doubling of quotas leading to parity in vote shares of developed and developing countries. Since India has the fourth largest GDP in PPP terms, it is stressing on economic weight with primacy given to GDP-PPP as the main criteria. The countries of BRIC will contribute to IMF only if their voting shares are increased substantially. Voting rights for a country such as Belgium equals China's in spite of China's gigantic economy.

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“金磚四國”對話與作

YUAN TAO

China

“金磚四國”對話與作

原燾大使
原中國駐玻利維亞、西班牙及巴西大使
首任中華人民共和國外交部駐澳門特別行政區特派員(1999-2002)
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首先，我十分感謝澳門亞太拉美交流促進會和魏美昌理事長對我的盛情邀請，使我有機會又能回到闊別數年的美麗和有獨特魅力的澳門。和日新月異的世界一樣，澳門也正在發生巨大、可喜的變化，令人印象深刻。此次“金磚四國”國際研討會的召開，證明澳門雖處一隅，但有國際視野，是一次有益的嘗試。

短短6年，“金磚四國”從經濟學概念到對話與合作平臺，發展可謂迅速。2003年，美國高盛公司發表了《與“金磚四國”一起夢想：通往2050年的道路》的全球經濟報告，正式提出“金磚四國”構想。當時，僅將其視為新興市場國家迅速發展的一個縮影加以分析。恐怕包括高盛自己在內的許多人都沒有預料到，“金磚四國”在今天會得到國際社會如此高度的關注，四國對話與合作能提升至如此高的層級。以“金磚四國”為代表的新興大國群體崛起是近幾年來國際關係中的突出特點。它們憑藉後發優勢，把握機遇，多年來保持高於發達國家的增速，日益成為世界經濟的驅動力和增長點。自2000年以來，全球超過1/3經濟增長來自“金磚四國”，他們手中握有3萬億美元的外匯儲備，國內市場廣闊，需求旺盛，已經成為全球消費和需求的主要引擎，是全球應對金融危機和經濟衰退的主要依靠。在我看來，四國加強對話與合作有其得天獨厚的優勢，是歷史發展的必然，這是因為：

第一，四國對話與合作是經濟全球化深入發展的產物。經濟全球化推動資金、資源、技術和勞動力在全球範圍的自由流動和優化配置，帶來全球產業分工的深刻變化和調整。四國順應全球化潮流，抓住全球化機遇，根據自身國情和比較優勢積極融入全球化進程。推動經濟全球化朝均衡、普惠、共贏方向發展，是四國共同的利益訴求，成為四國在國際經濟事務中加強合作的重要動力。

第二，四國在當今世界的地緣戰略中重要性突出，在各自周邊地區及跨地區合作中發揮著重要作用，越來越具有全球性影響。他們在國際政治和經濟事務中要求擁有更多發言權，參與權和決策權。四國對話與合作是國際體系和格局演變的結果。國際金融危機凸顯現有國際經濟金融體系的弊端和不足。以“金磚四國”為代表的新興市場和發展中國家呼籲按照全面性、均衡性、漸進性、實效性的原

則，推動建立公平、公正、包容、有序的國際金融新秩序，成為推動將二十國集團（G20）作為全球經濟合作主要平臺的重要力量。共同的歷史責任和相近的立場使四國在全球經濟治理事務中走到一起。

第三，四國對話與合作經濟基礎較好，發展潛力巨大。眾多新興市場國家中，高盛公司將中國、俄羅斯、印度、巴西作為重點研究物件，有其客觀性。一是在面積、人口、資源、市場等“硬體”上優勢突出。比如，四國同為地區大國，國土面積占世界陸地總面積的26%，人口占全球總人口的42%。二是政局穩定，經濟發展迅速。2006-2008年，四國經濟平均增長率為10.7%，遠高於4.1%的世界平均增長率。2008年四國的GDP占全世界的14%，進出口貿易占世界貿易總額的13%，四國對世界經濟增長的貢獻率達50%。當前，四國雖受國際金融危機影響，但總體上仍是世界經濟復蘇的重要拉動力。據有關國際金融機構測算，2010年全球經濟增長將主要來自以“金磚四國”為代表的新興市場國家。三是經濟互補性強。四國在資金、資源、市場、技術、人力等領域各具優勢，在經貿、財金等領域有廣闊的合作空間。據統計，2008年，中印雙邊貿易達到518億美元，（而同期美印貿易額是400多億美元，比中印貿易少近1/5），中國成為印度第一大貿易夥伴;中國與巴西的雙邊貿易達到485億美元，占中國與拉丁美洲貿易的33%，中國成為巴西第一大貿易夥伴和第一出口目的地國;當然，這其中有去年國際鐵礦砂價格上漲，中國從上述兩國進口大量鐵礦砂的原因，但無論如何雙邊貿易的規模都是非常可觀的。08年中國與俄羅斯雙邊貿易更是達到了568億美元，是1994年雙邊貿易的11倍。

關於資源情況，資源當然包括了很多方面，我們僅從一些大宗礦產看，近年的勘探表明，巴西石油儲量大約是700-1000億桶，是世界第六大儲油國，巴西的鐵礦砂儲量是210億噸，俄羅斯的石油儲量占世界的13%，天然氣儲量占世界的30%，印度的鐵礦儲量也很豐富，是世界上名列前茅的鐵礦大國。中國目前雖然鐵礦砂、石油等原料不能滿足自身的需求，但中國的資源分佈十分廣泛，物種齊全，有許多稀缺的和尚未探明的資源，在960多萬平方公里的土地上可以稱得上幅員遼闊，物產豐富。而且中、印、俄、巴四國在人力和作為經濟體的其他實力方面也都有各自的優勢，相互補充的地方難以勝數。

第四，四國對話與合作政治基礎穩固。四國分佈于亞洲、歐洲、美洲，都是各自地區有代表性的國家，在國際事務中具有重要影響，對許多全球性問題也具有相同或相似的看法。這為四國對話與合作打下堅實基礎。

朋友們，

近年來，“金磚四國”合作不斷邁上新臺階，今年6月，四國領導人在葉卡捷琳堡舉行了首次正式會晤，從戰略高度為四國合作規劃了未來，指明了方向，在四國合作歷史上具有里程碑的意義。四國負責安全事務的高級代表舉行了首次對話，外長會晤日漸機制化，財長會晤方興未艾，在推動國際社會合作應對金融危機、改革國際金融體系等方面發揮了積極作用。此外，四國學術研究機構也舉行了兩次研討會，為四國對話與合作提出了許多有價值、有見地的建議。

展望“金磚四國”未來合作走向，我認為，要重點做好以下幾方面工作：一是鞏固經濟復蘇，推動互利共贏，在實現本國經濟平穩較快發展的同時，帶動地區乃至世界經濟共同發展；二是把握好國際體系和格局調整的歷史性機遇，積極發揮影響，維護廣大新興市場和發展中國家共同利益；三是循序漸進，打好基礎，先把四國經貿、財金合作的這篇文章做好，避免攤子鋪得太大，步子邁得過猛；四是態度務實，面向成果，可在四國有共識、有興趣、有潛力的專業領域加強合作，爭取產生一些看得見、摸得著的成果。

朋友們，

今天的研討會恰逢其時，很有必要。各國專家學者濟濟一堂，各抒己見，為四國合作未來發展提供了重要的智力支援。在經濟全球化深入發展的今天，加強雙邊和多邊的相互合作，是世界各國的必然選擇。我深信，在“金磚四國”的共同努力下，未來合作必將取得更大的發展。

謝謝大家。

THE APPEAL AND THE DEVELOPMENT TREND OF BRIC

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Leaders of the 4 countries of BRIC formally met for the first time in Yekaterinburg, Russia, on June 16, 2009 which attracted worldwide attention. Developing countries showed common interests in and placed high hopes on the meeting; while developed countries also paid great attention to it and were concerned about new ominous challenges.

HOW COMES THE FAME OF "GOLD BRICK"? WHY IS IT GOLD BRICK RATHER THAN "SILVER BRICK" OR "BRICK"?

In October, 2003, Goldman Sachs noted for the first time in a report that there had appeared an eye-catching new thing: BRIC (formed by the first letter of English version of national names of Brazil, Russia, India and China). BRIC derives from the English word "brick", and it remains unknown which master interpreter translated it into "Gold Brick" in Chinese. The Translation is not a random choice. It reflects the highlights of the changes of our times. With amazingly steady development speed of their economy, these four countries generally enjoy good prospects of investment environment and development. Therefore, it seems not enough to call them "silver brick", and even less appropriate to refer them as "brick", which "Gold BRIC" is the best choice.

First of all, BRIC is a representative reflection of developing countries' rise widely in the new era. During the past five or six years, BRIC's contribution to the world economy reached approximately 50 percent; calculated by way of PPP, the economic aggregate of BRIC has surpassed that of the USA. From 2006 to 2008, the average economic growth of the 4 countries was 10.7 percent. Goldman Sachs which put fr, while BRIC's economy will have a growth rate of 4.8 percent. Of the global foreign exchange reserves, BRIC holds about 300 billion U.S. dollars, accounting for more than 40 percent, which is of crucial importance in the field of international finance. In the international economic system, they are playing an unprecedentedly important role.

Secondly, the emergence of BRIC is the reflection of change of our era. It accelerates the growing trend of world multi-polarization, and results in new and historic changes to the balance of international power. If we say that the national independence and liberation movement in 1950s and 1960s inflicted a deadly blow politically to the system of imperialism and colonialism after the Second World War, then this time the rapid rise of developing countries represented by BRIC poses the most serious impact on the west-led economic system in economy and development models, and such impact is extending to political fields.

As an American scholar put it well that now he seems to have seen a new bipolar world: one is the U.S. full of worries and another

is a group of emerging countries full of hopes. Sarkozy, French president also said that the world is going to usher in an era of "relative powers" and BRIC has created conditions for forging a new multi-polar world with great powers in chorus.

IT IS THE NEED OF THE CURRENT ERA'S DEVELOPMENT AND A NATURAL COURSE.

It was not very noticeable when the graceful name of BRIC had just appeared. However, it is after all a newly emerging thing, which draws experts to begin to ponder and research it, and senior officials of the four countries begin to hold informal meetings on it. Following a meeting by the four countries in 2007, proposed by the President of Brazil, the leaders and Minister of Foreign Affairs of the four countries have already met several times, but the meetings were held only during the meeting of G7 or UN.

In May, 2008, the Foreign Ministers of BRIC had one-day meeting in Yekaterinburg, Russia, for the first time in a native city of BRIC. The joint communiqué issued at the conference emphasized that "the BRIC dialogue is based on mutual respect, trust and common interests, identical or similar views on pressing problems of global development and the dialogue has bright prospects."

It shows that BRIC has achieved far-reaching significant consensus on major problems facing the world, and these four countries have common interests and concern in international affairs. It indicates that BRIC will develop toward Summit and cooperation in broader areas. In order to strengthen the integral voice and influences of emerging economies, and to promote world peace, stability and common development, it is necessary for them to enhance dialogue, coordination and cooperation.

After the conference of Foreign Ministers in Yekaterinburg, Russia, meetings have been more frequently held by BRIC in the wake of the outbreak and spread of the economic crisis. Both Financial Ministers and Presidents of Central Banks of BRIC held meetings prior to the past two G20 summits, at which they conducted consultations and put forward some valuable suggestions. The BRIC summit held in Yekaterinburg this time is just a logical result of such process and also a start of playing important role on the international stage under the new circumstances, which features with vivid character of the current times and historical significance.

THE APPEAL AND VITALITY OF BRIC

Before the summit, there were numerous good comments on BRIC in the international community and high expectations were generally made. But there were also some different views. Some even believed that these four countries have nothing in common except the "ambitions" to struggle for power. Few comments stressed the difference of the ideology and social system in the four countries and exaggerated conflicts and competition among the four countries, saying that though the four countries seem to be on intimate terms with each other at present, in fact, they have their own ulterior motives and their combination cannot last. In my opinion, such viewpoints if are not caused by the Cold War mentality, at least are great miscomprehension on the development of current situation.

As is known to all, there are two significant features in the profound evolution of the current international situation and structure. One is that developing countries are widely emerging and the other is that the world multi-polarization is speeding up in its development. The international balance of power is undergoing irreversible change. Under such circumstance, it is natural and necessary for the large developing countries to form different alignments as a result of different historical backgrounds and geopolitical context. Currently, except BRIC, the other representative cooperation forms among developing countries include the five-nation mechanism (China, India, Brazil, South Africa and Mexico) having dialogue with G8, the China-India-Russia trilateral cooperation mechanism and the three-nation "quasi-alliance" of India, South Africa and Brazil. These cooperation mechanisms are inter-dependent and intertwined with each other. These developing countries have both their specific properties as well as common characteristics. Despite of disparities and there exist some real contradictions among these developing countries, but there doesn't exist any antagonism, let alone mutual exclusion and the "ulterior motives". They have basically the same general direction which is to strive for a peaceful environment for great development and to change the unreasonable and unjust international system. Specifically, it is their general demand to democratize international relations, respect diversified development models, require equal partnership and "win-win cooperation" and refrain from confrontation. The appeal and vitality of "BRIC" exactly lies in their adherence to these important principles, in their same or similar strategic pursuance and their advocacy for transparent, open and non-exclusive cooperation and dialogue. A good case in point is that they fully affirmed the achievements of G20 summits in Washington and London.

As far as the bilateral relationship within BRIC is concerned, China keeps very good bilateral relations with the other three nations and mutually beneficial cooperation has always been the mainstream of their relationship. Despite that some right-wing media in the U.S. and Japan recently make every effort to sow discord between China and India, but both countries give top priority to their overall interests. In Yekaterinburg Indian Prime Minister Manmohan Singh said to Chinese President Hu Jintao that the Government of India will place the India-China relations in position of highest priority and thrive in push forward cooperation in all fields; India will not allow any

person in Indian territory to engage in anti-China political activities. Obviously, these remarks are tantamount to refuting the above-mentioned media instigation.

DEVELOPMENT PROSPECTS AND STRATEGIC PURSUANCE OF BRIC

The 16-point Joint Statement issued by the first official summit is very widely-ranged, covering almost all the pressing issues concerned about by the people in today's world. To sum up, we can generally see three future development trends of BRIC, as well as their strategic pursuance.

First, BRIC will gradually develop in the direction to the "pan-mechanism". The leaders of the BRIC countries will meet once a year. They will meet next year in Brazil. If nothing goes wrong, India and China will be the hosts in the following years. There will be even more senior official meetings on other fields. The nature of meetings and dialogues will be open and transparent, and gradually deeper and deeper. The possibility is not ruled out for BRIC to naturally take the so-called 4+X form (such as plus South Africa and Mexico) to expend the scope of dialogue and cooperation.

Second, the BRIC strategic objective is to seek to establish a more democratic and fairer multi-polar world, committing themselves to promoting the multilateral diplomacy and supporting the core status and central role of the United Nations. China and Russia are permanent members of the UN Security Council. If India and Brazil become permanent members of the Security Council in some form in the future, the international status and influence of BRIC will be further elevated. They will jointly safeguard the overall interests of developing countries, but do not intend to replace G7. They would like to see that dialogues and cooperation with developed countries will be on an equal footing.

Third, the BRIC countries are determined to jointly cope with the global financial crisis and endeavor to take the lead in realizing the economic recovery through coordinating their positions and strengthening the unity. At the same time, the BRIC countries are making efforts to promote the reform of the international financial system towards a more equitable, just and rational direction so as to reflect changes in the world economic situation. Most importantly, one: to uplift the voice and representativeness of the emerging market and developing countries in the international financial institutions; two: to establish a stable, predictable, and more diversified international monetary system; three: to oppose trade protectionism resolutely. They are somewhat satisfied that the third G20 summit held in Pittsburgh in September has achieved more progress in taking collective actions.

Fourth, judging from the above, the BRIC's strategic pursuance, such as calling for "the establishment of a more democratic and fairer multi-polar world" and promoting diversification of the international monetary system, are obviously in irreconcilable contradiction with America's ambition of Pax Americana and maintaining U.S. dollar's dominance in the world. However the BRIC countries are more pragmatic and good at tolerance. The BRIC countries generally advocate mutual respect, equal consultation, mutual cooperation and common development instead of confrontation. What is more, now the diplomatic concept of the U.S. seems to have had some change. Obama Administration puts more emphasis on multilateral cooperation instead of waving big sticks willfully, diluting the smack of "hegemony". Therefore, in the process of the formation of the new world order, especially in dealing with the issue of the financial crisis, it is not unimaginable for the four countries of BRIC to have cooperation of some forms with the U.S. while at the same time to compete with it.

In short, BRIC has quite strong vitality and appeal and a bright development prospect. Of course, these countries have respectively their difficulties, some even rather serious, and they also have disturbances and obstacles from external forces, and so their future will not be a smooth sailing. However, the general direction of their rapid rise is definite and irreversible.

PERSPECTIVES ON CHINA INDIA RELATIONS

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EVOLUTION OF THE RELATIONS

China-Indian relations have been tortuous and uneasy since they established diplomatic relations in 1950. The relationship was cordial in early 1950s. The two sides initiated the Five Principals of Peaceful Coexistence. But just within several years the relationship became hostile because of the Tibetan issue and the border dispute and later the two giant neighbors went into a short but fierce border war in 1962. These events created very deep mutual distrust and psychological scar in India. Since then their relations remained in a almost frozen status.

India's Prime Minister Rajiv Gandhi's ice-breaking visit to Beijing in 1988 became a turning point and the relationship began to show improvement. In the following decade, efforts were made in a process of repairing and rebuilding relations. Regular high-level visits have been exchanged, bilateral trade has been on the rise, cultural exchanges have been established, and new rounds of border talks have been held. Agreements on maintaining peace and tranquility in the border area signed in 1993. An array of confidence-building measures (CBM) were introduced In 1996.

India-China relations suffered a setback when the Indian government officially cited the Chinese threat as a rationale for its nuclear tests in 1998. However, the discordance did not last long. With the efforts of both governments the relationship was soon repaired. This event shows that neither China nor India does wish to be locked into a status of confrontation and the process of improving their relationship to be disrupted.

In the last decade despite the pending border dispute and mutual suspicions over each other's military expansion and strategic intentions China and India have made major progress in their political, economic, and security relationship. During Prime Minister Vajpayee's visit to Beijing in 2003, the two sides singed a Joint Declaration which actually serves as comprehensive CBMs between the two countries. Both sides are committed to be mutual respect and sensitivity for each other's concerns and equality and the two countries are not a threat to each other. Neither side shall use or threaten to use force against the other. The two sides also reached a very important agreement that while India recognizing the Tibetan Autonomous Region as part of China's territory China recognized Sikkim as an Indian State.

In 2005 during Premier Wen Jiabao's India visit, the two sides established the strategic and cooperative partnership for peace and prosperity. In 2006, when President Hu Jintao visited India the two governments issued a joint statement highlighting a 10-point strategy. The strategy aimed at fully realizing the potential for cooperation in a wide range of areas, upgrading China-India relations to a qualitative new level and further substantiating and reinforcing

their Strategic and Cooperative Partnership. The two countries also signed more than a dozen agreements to strengthen cooperation in trade, investment, energy, and cultural and educational exchanges. Prime Minister Dr. Manmohan Singh visited China in January 2008. During the visit, a joint document entitled “A Shared Vision for the 21st Century of the Republic of India and the People’s Republic of China” was issued, outlining common positions on a number of international and some bilateral issues. This indicates that the two countries would like to cooperate on the global and regional issues which they have shared interests.

In this decade, Beijing and New Delhi have stepped up functional cooperation in all areas. The two foreign ministries have instituted dialogue mechanisms on issues relating to counter-terrorism, policy planning and security, besides strategic dialogue and regular consultations. There are also close cooperation in areas as diverse as water resources, judiciary, science & technology, audit, personnel, finance, labor etc. The two sides have also maintained close consultation and coordination on issues of mutual concern, such as climate change, counter-terrorism, and energy and food security. In the global and regional arena, both countries have made cooperation, such as in the UN, WTO, as well as in regional grouping such as the East Asia Summit, the ASEAN Regional Forum, the China-India-Russia trilateral Foreign Minister’s Meeting, the BRICs. Besides, the South Asian Association for Regional Cooperation (SAARC) accepted China as an observer and India also enjoys an observer status in the Shanghai Cooperation Organization.

Since the last decade, the bilateral trade has grown very fast and reached US$51.8 billion in 2008 from US$1.9 billion in 1998, increasing 25 times just within 10 years. China is now India’s biggest trade partner and India is 10th trade partner of China. The value of bilateral trade is expected to pass $60 billion next year. Considering their enormous population and huge market size and economic complementarities, there are should be a very broad space for further enhancing their economic relations. China is now the second largest economy in the world and India is poised to become the third largest in not distant future. Although seriously impacted by the global financial and economic crisis in 2008–2009, both economies achieved more than 8% and 6% growth respectively. It is widely believed that since the principals of the both economies are good both countries could maintain high grow rate in the coming years. Geo-economics has now played more and more positive roles in international relations. Closed economic ties could create mutual economic interdependence and vested interests which are stable factor in the relationship and is helpful in building mutual trust.

China and India have also made bilateral engagement between the militaries. The two countries engaged in a joint naval search and rescue exercise off the coast of Shanghai in November 2003. In August 2004, their frontier troops held a joint mountaineering training in China‘s Tibet Autonomous Region. In December 2007, the two countries held a joint anti-terrorism military training called “Hand-in-Hand 2007” at the PLA’s Kunming Military Academy, located in China’s Yunnan Province. The joint training involves 103 ground troops from the Chinese People’s Liberation Army (PLA) and an equivalent number from the Indian Army. In 2008, the two countries held another joint anti-terror military training code-named “Hand in Hand 2008”, in south India’s Belgaum District. These activities are militarily insignificant but deeply symbolic for their cooperative approach in security matters. Working together in the military field will undoubtedly decrease the possibility of miscommunication and misunderstanding, making conflict less and less probable. In May 2006, the defense ministries of China and India signed the Memorandum of Understanding (MOU) for Exchanges and Cooperation in the Field of Defense, which provides a sound foundation and institutional framework for further development of defense cooperation. In November, the two countries held their first Annual Defense Dialogue in Beijing.

THE BORDER DISPUTE

The border dispute is the biggest unresolved problem and it is the most potentially conflict prone issue between China and India. Their more than two thousand kilometre border is divided into the eastern, middle and western sectors. At present both countries have made large territory claims. China claims 90,000 square kilometres on the eastern sector, 33,000 square kilometres on the western sector and more than 2,000 square kilometres on the middle sector. India claims that China occupied 38,000 square kilometres of land in the remote Aksai Chin plateau on the western part of the border. India also says China is illegally holding 5,180 square kilometres of land in Kashmir ceded to it by Pakistan in 1963. Of the three sectors, the central sector is said to be the least controversial. But even here the two countries have been unable to reach a consensus in the work that jointly check and determine the segments of the line of actual control (LAC) where they have different views as to its alignment.

There were several incidents of clashes in the border areas after 1962 and even a serious crisis in 1986-1987. The clashes happened not because of any attempt to provoke a war or change the LAC, but because the two sides have differences in perceptions of the precise locations on the ground and on the map of several points on the LAC. Realizing the risks of potential military conflict in the border areas, China and India have adopted a policy of establishing CBMs. In September 1993 the two sides reached the Agreement on Maintaining Peace and Tranquility in the Border Areas along the Line of Actual Control. Article one of the agreement provides: “The two sides are of the view that the China-Indian boundary question shall be resolved through peaceful and friendly consultations. Neither side shall use or threaten to use force against the other by any means. The two sides shall strictly respect and observe the Line of Actual Control.”

In November 1996, China and India signed another important agreement, the Agreement on Confidence Building Measures in the Military Field along the Line of Actual Control in the China-Indian Border Areas. This second agreement means to devise additional CBMs and move towards force reduction in the border areas. The two militaries committed to limit the number of field-army troops, border-defense forces, paramilitary forces, and major categories of armaments along the LAC; to avoid holding large-scale military exercises near the LAC and to notify the other side of exercises involving one brigade (5000 troops) or more; not to discharge firearms, cause biodegradation, use hazardous chemicals, set of explosives, or hunt with firearms within two kilometers of the LAC; to hold regular meetings of border representatives; and to set up hotline telecommunications links between local military headquarters along the LAC.

Border talks began in 1980's but little progress has been made. During Rajiv Gandhi's visit in 1988 India-China decided to set up a Joint Working Group on the Boundary Question to discuss the boundary-related issues. The JWG has met 13 times. The last meeting was held in New Delhi on November 21, 2002. Efforts had been made by both sides to negotiate a settlement to the boundary dispute, but things moved slowly. Both sides realized that the key issue in resolving the dispute is political and discussion at a purely official and technical level may have reached a plateau. To speed up on the matter of settling the boundary dispute during Indian Prime Minister Vajpayee's visit in 2003, the two countries decided to appoint special representatives "to explore from the political perspective of bilateral relationship the framework of a boundary settlement". Until now 13 rounds of talks have been held and some consensus has been reached for the guiding principles. Both sides are committed to resolving the issue through negotiations and in a fair, reasonable and mutually acceptable manner on the basis of the Agreement on Political Parameters and Guiding Principles for the Settlement of the China-India Boundary Question concluded in 2005. During Chinese Premier Wen Jiabao's visit to New Delhi in April 2005, additional CBMs were added to the 1996 agreement. These included, among others, border meeting points at Kibithu–Damai in the eastern sector and Lipulekh Pass in the Middle Sector; exchanges between the relevant military regions of China and army commands of India; and exchanges between institutions of training, sports and culture of the two armed forces. In July 2006, China and India re-opened Nathula, an ancient trade route which was part of the Silk Road. Nathula is a pass through the Himalayas. Observers of both countries say that the re-opening of border trade will help to ease the economic isolation of the region and enhance mutual confidence.

However, the ongoing border talks by the special representatives have not achieved a major breakthrough so far. Given the big difference and strong nationalist sentiments in both countries, neither side could make unilateral concessions and the final resolution will need time. In the recent couple of years, signs of their disagreements on the resolution of the boundary question have come to the surface. Several irritant things happened not only between the media and netizens but also between the governments. India has recently begun to reinforce its own claims in the border areas and is augmenting forces in the eastern sector along the border of Arunachal Pradesh which China does not recognize.

LOOKING AHEAD

The future of the development of the relationship much depends on China and India's strategic objectives and their policies. At present and in the foreseeable future, China and India's policy are and will be determined by the following factors.

Firstly, both China and India's policy are linked to their long-term strategic objectives:

1. the preservation of internal stability and focusing on economic and social development;
2. the attainment and maintenance of favorable geo-strategic environment, particularly in the periphery region. To realize these objectives, both countries need a peaceful and stable environment.

Secondly, both China and India face some pressing security compulsions internally, such as ethnic separatism, religious extremism and terrorism. Given the above preponderance of security concerns, they have to devote much of their attentions internally.

Thirdly, all indications show that both China and India are rising major powers and important players in the regional as well as international arena. The dual rise of the two giants has two kinds of implications for each other. As huge markets, both can make a significant contribution to the other's economic development and can become a partner in managing regional security and non security issues in the interest of stability in Asia and their respective national interests. Alternatively, both have the ability to become a major threat to vital interests of the other. Should China-Indian security relations deteriorate, each could deny the other's access to its economic resources and market, could make trouble in the highly concerned issues of the other, and could become allies of other powers to contain each other.

Finally, China and India, as the two largest developing countries, they have shared common interests and near identical stand on many international issues. By cooperating rather than conflicting, China and India can increase their negotiating positions with the developed countries and promote the establishment of a better global economic order and political order.

Given all the above factors, their policies towards the other will remain pragmatic and cooperative. There is no doubt about the fact

that peace is the best option for both countries in their relationship. The relationship could certainly become conflictual if one of them challenges the other's core interests. However, considering the fact that both China and India face pressing security matters internally and externally and both take economic and social development as their most important priorities, thus, it is quite unlikely that the above situation could emerge.

The border dispute remains as an irritancy in China-India relations. Since there is no clear definition of the LAC frictions or skirmish can not be totally ruled out. If the irritants happened again and again, the momentum of further improvement of the relationship and the border talks could be disturbed or even disrupted. However, Judged on the gain and loss calculations, a planned attack by any side are quite unlikely and the possibilities of another border war can be ruled out.

CONCLUSION

Having reviewed the Evolution of Sino-Indian relations, we can see that for the past two decades both countries have paid great attention to normalizing their relations and pursued a policy of constructive engagement with each other. The dominant policy orientation is driven by China and India's strategic rationale. A policy of detente, peaceful resolution of disputes, and enhanced cooperation is seen to be in their long-term political and economic interests. Both countries have self- confidence that they are rising major powers and will be major players in the multi-polar world. They also realize that if they have locked in a status of military confrontation, their rising process would be disrupted.

This realization, among others, leads to the conclusion that the only rational and realistic option for the two neighbors is mutual respect, mutual accommodation and cooperation. It makes little sense for the two rising powers to engage in confrontation or military conflict in the foreseeable future. Neither India nor China can afford to be distracted from its chosen path that places primacy on development in the national policies. A war for either of them is highly detrimental to core interests. As two largest newly emerged economies, China and India have many common interests. Despite suspicions, distrusts and competitions, the two countries are likely to coordinate and cooperate on global and regional issue that their interests converge, such as international trade, the global environmental agenda, multi-polar world and non-traditional security issues, among others.

THE SIGNIFICANCE OF BRIC AND MACAU'S ROLE AS A "MELTING POT" FOR THE FOUR "GOLDEN BRICKS"

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One of the buzzwords today is BRIC, an acronym that refers to the fast-growing developing economies of Brazil, Russia, India, and China, coined by Goldman Sachs economist Jim O'Neill in 2001. It is quite unusual that this acronym could attract leaders of four countries to Yekaterinburg, Russia, in June 2009, for a summit.

One can either consider BRIC as four individual countries or a collective body. As individual countries, BRIC, along with other emerging economies, have attracted world's attention in recent years simply because they have achieved higher economic growth rates and growth potentials. As a collective body, BRIC is yet to be institutionalized.

This paper will first review the significance of the emerging economies and then discuss whether it is necessary and possible to turn BRIC into a formal organization, a genuine "G4". Finally, it will try to explore ways for Macau to make advantage of the "BRIC fever".

I. THE SIGNIFICANCE OF THE EMERGING ECONOMIES

There is a BRIC fever today. From People's Daily to New York Times, and from the discussion on reforming the international financial system to dealing with climate change, BRIC is the buzzword. A search for this acronym in Google turns out 5.5 million results.

There are two ways of looking at BRIC. One is to see it as a synonym of emerging economies represented by the four countries, and the other is to consider it as a bloc or a "G4" in the making.

If we see BRIC as a synonym of emerging economies, the major question we need to ask is: What is the significance of the emerging economies?

A. IN THE POLITICAL FIELD.

In the political field, the emerging economies are likely to exert the following influences upon the world. First, they will challenge international power politics and call for the establishment of a multi-polar world. The fall of the Berlin Wall and the subsequent end of the Cold War terminated both the bi-polar world order and competition for hegemony between the United States and the Soviet Union. But it failed to create a multi-polar world order. As a matter of fact, international politics is still characterized as one super-power dominance.

Leaders from BRIC and other emerging economies have repeatedly called for the realization of a multi-polar world. Without doubt, it is because of BRIC's importance that G7 is going to be

replaced by G20 in dealing with global issues.

Second, they are likely to empower the South in the North-South dialogue. In the age of globalization, the world is increasingly more inter-dependent. The North and the South are mutually needed to facilitate economic and social development, tackling such issues as preventing climate change, reducing poverty, counter-attacking, terrorism, etc, and seeking a common goal of prosperity and security. Past experiences have proved that the South was in an unfavorable position to ask for more economic aid and advanced technology from the developed nations. Nor was it able to play an important role in making the international rules of the game. With the emergence of BRIC, it is likely that the developing world would acquire more bargaining powers to negotiate with the developed countries.

Third, they will be able to build up their soft power. For instance, each BRIC country has its own unique cultural identity. The civilizations of China, India and Russia have a history of thousands of years. With increasing economic strength, BRIC will have an opportunity to increase their soft power. One notable example is the establishment of Confucius Institute by China.[1] By the end of 2009 around 250 Confucius Institutes have been established all over the world.[2]

1 Confucius Institute is non-profit public institute which aims at promoting Chinese culture and supporting local Chinese teaching around the world

2 http://msn.ynet.com/view.jsp?oid=61482339

Fourth, they will facilitate the process of UN reforms. Brazil and India have expressed their interest to become permanent members of the UN Security Council. Undoubtedly, if their dreams come true, representation of the developing countries in the UN body would certainly be expanded.

B. IN THE ECONOMIC FIELD.

In the economic field, the emerging economies are also likely to have a great impact upon the world. First, they are capable of contributing to world economic stability. This is true in light of the current global financial crisis. Expectation for China is so high that, as the joke goes, China is expected to save the world.[3]

China alone would not be able to accomplish such a task. But the economic weight of the BRIC countries should not be under-estimated. According to the World Factbook of the Central Intelligence Agency, BRIC's total GDP was US$8.8 trillion, compared with US$14.4 trillion for the United States.[4] The BRIC countries account for 42 percent of the world's population and 12.8 percent of total world trade. When calculated by purchasing power parity, their contribution to the world economy could be as high as 50 percent.[5]

3 The joke goes like this: In 1949, only socialism could save China; in 1979, only capitalism could save China; in1989, only China could save socialism, and in 2009, only China could save capitalism.

4 https://www.cia.gov/library/publications/the-world-factbook/geos/us.html

Second, they can unite with other developing countries to protect the interests of the developing countries in the Doha Round. The Doha Round was launched in 2001 with a primary goal to help every country, rich or poor, gain from free trade. Due to big differences on many issues, particularly on agricultural tariffs, subsidies and market access, WTO members have yet to reach a consensus. A new deadline, i.e., 2010, has been set to conclude the round. In order to protect the interests of the developing countries, BRIC should play a more important role.

Third, they will help push forward the process of reforming the international financial system. Zhou Xiaochuan, governor of China's central bank, has suggested creating a "super-sovereign reserve currency" to replace the dollar over the long run. Officials from other BRIC countries have also expressed similar views. As the Joint Statement of the BRIC Countries' Leaders of the first BRIC summit in Yekaterinburg, Russia, says, "The emerging and developing economies must have greater voice and representation in international financial institutions, whose heads and executives should be appointed through an open, transparent, and merit-based selection process. We also believe that there is a strong need for a stable, predictable and more diversified international monetary system."[6]

Fourth, they are likely to enhance competition for the access to natural resources. Indeed, development of science and technology has led to de-materialization of production by using more and more man-made substitutes. However, raw materials are still important and essential for making some products. Consequently, in order to maintain rapid economic growth, securing supply of raw materials is crucial.

In per capita terms, China and India are relatively poor in terms of reserves of all types of resources, whereas Russia and Brazil are quite rich. So there is a plenty of opportunities of cooperation in this area. But this fact cannot conceal the likelihood that rapid economic growth in some of the emerging economies simply means greater demand for raw materials and more fierce competition.

Fifth, they will speed up the process towards the UN's Millennium Development Goals by reducing poverty. Over the past two or three decades, BRIC have been successfully reducing poverty by driving millions of people out of hunger. This achievement is indispensable to realize the UN's Millennium Development Goals.

5 http://www.upiasia.com/Economics/2009/06/18/aspirations_and_limitations_of_bric_summit/3960/

6 http://www.fmprc.gov.cn/eng/zxxx/t569480.htm

C. IN OTHER FIELDS.

In addition to political and economic fields, BRIC will also wield their influences on other issues. For instance, with rising economic strength, BRIC might have an opportunity to modernize their military. Military expenditures of the BRIC countries have risen over the past one or two decades.

Rising economic strength benefits BRIC's scientific and technological autonomy. So BRIC are likely to demand a bigger say in devising international standards. But this is not an easy job. China, for instance, wished to set up its own 3G standard, i.e., TD-SCDMA, in 2007. But the U.S. Under Secretary of Commerce Christopher Padilla says, China's standards "certainly provide Chinese domestic companies an unfair advantage, but they also carry great risks for China." He warned China that it risks "technological isolation" for developing unique technical standards of its own that are shutting out foreign competition.[7]

Nokia was also unwilling to accept China's 3G standard. A CEO of a Chinese mobile phone company asserted that the 3G industry in China will continue to develop regardless of Nokia's participation. He also stated that Nokia will pay the price for its "pride and prejudice."[8]

Despite the above-mentioned possibilities, we should be realistic about the following four points:

1. Geopolitical and historical factors might generate frictions of interest among, India, China and Russia.
2. BRIC still depends heavily on the U.S. economy.
3. The U.S. dollar will continue to be dominant for the foreseeable future of the world.
4. BRIC countries' economic structures are vulnerable. Brazil and Russia rely heavily on exporting resources and China and India depend on cheap exports.

On many issues ranging from U.N. reforms to the U.S.-led war against Iraq and from the Doha Round to anti-terrorism, developing countries sometimes do not speak with one voice. It is still unclear whether the rising position of BRIC and other emerging economies could make the camp of the developing world more fragmented.

7 7 OPENNESS OR ISOLATION: CHINA'S QUEST TO BE AN INNOVATIVE SOCIETY, Address by C. A. Padilla, U.S. Chamber of Commerce, May 8, 2008. http://www.trade.gov/press/speeches/padilla_050808.asp 8 "Nokia to regret ignoring China's 3G Standard", http://english.peopledaily.com.cn/90001/90776/90884/6408711.html

8 "Nokia to regret ignoring China's 3G Standard", http://english.peopledaily.com.cn/90001/90776/90884/6408711.html

II. AN INSTITUTIONALIZED BRIC?

If we see BRIC as a bloc or a "G" in the making, the following questions need to be addressed: First, why not BRIC plus? Jim O'Neill did not explain why he focused only on the four emerging economies in his 2001 report. As a matter of fact, other emerging economies such as South Africa, Mexico, Korea, etc., are also important. That is why some observers would like to coin BRICS (BRIC + South Africa), BRICM (BRIC + Mexico) and BRICK (BRIC + Korea).

In recent years there are other labels describing the rising economic importance of the developing countries. These names include VISTA (Vietnam, Indonesia, South Africa, Turkey and Argentina) and Next 11 (Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, the Philippines, South Korea, Turkey, and Vietnam).

We should not forget G8 plus 5 (Brazil, China, India, Mexico and South Africa). It seems natural to put Russia and the other "*plus 5*" into one group so that the group of big emerging economies can include BRIC, Mexico and South Africa.

D+C Development and Cooperation, a monthly publication funded by Germany's Federal Ministry for Economic Cooperation and Development, uses the phrase "anchor countries". It says, "Through the sheer size of their economies (China and India), they act as powerhouses with massive influence on regional economic and trading relations…In political terms, too, they play a special role within their own regional context…Countries like Brazil, Mexico and South Africa, for example, are the driving forces behind associations for regional integration…South Africa and Nigeria, for instance, are taking on increasing responsibility in regional peace missions." The German journal believes that "anchor countries have emerged as important players in the international political dialogue, be it on matters of global governance or negotiations on the world trade regime or financial system."[9]

Second, would BRIC be turned into an institutionalized bloc? By saying "institutionalized", it means BRIC would become a formal organization with an agreed charter and permanent secretariat in place. Then, leaders of the member nations would meet regularly to discuss issues of common interest.

Whether or not BRIC could be institutionalized involves two issues, i.e., necessity and possibility. To put it another way, we have to ask two questions: is it necessary and is it possible to do so?

The first BRIC summit was held in Yekaterinburg, Russia, in June 2009 and a declaration was published. This is the first summit

9 http://www.inwent.org/E+Z/content/archive-eng/05-2005/tribune_art1.html

and like Rome, “it cannot be built in one day”. However, a non-institutionalized BRIC produces more smoke than fire. Therefore, in order to make BRIC more powerful and important on the world stage, it is necessary to turn it into a genuine “G4”.

But, how would an institutionalized BRIC deal with its relations with other emerging economies in the developing world? Would other emerging economies be ready to accept what the BRIC leaders say?

Then, how would BRIC make it an actual “G4”? The greatest challenge is how to resolve their differences over some important global issues. For instance, an unresolved border still exits between China and India.

Last but not least, what can BRIC do as a real “G4”? Or, what can BRIC do and cannot do? In the world today, all the blocs or “G” can be categorized into the following: for trade promotion (NAFTA, Mercusur), for economic cooperation (APEC), for political purpose (Non-aligned Movement), for both economic and political cooperation (ASEAN), for regional security (Shanghai Organization of Cooperation). It seems that BRIC is not for trade, not for regional security, and not for political objective. So far BRIC is simply a forum of discussion or a platform of coordination regarding their policies towards the global issues.

However, would other developing countries accept what BRIC says? Could BRIC represent other emerging economies in G20? Would other developing countries like Mexico, Argentina, Egypt, South Africa and Korea resent BRIC?

III. BRIC AND MACAU

If BRIC is to remain as separate and individual countries, not as an authentic “G4”, Macau’s role might be quite limited. If BRIC could be institutionalized, Macau might be able to play a bigger role. It might be the seat of a permanent secretariat for BRIC due to the following reasons: 1) it has the advantage of geographical location connecting the east and the west; 2) it has already hosted the permanent secretariat for the Forum of Economic and Trade Cooperation for China and the Portuguese Countries established in 2003; and 3) it has enough financial resources to support the work of a secretariat.

In turn, a seat of permanent secretariat for BRIC will also facilitate Macau’s ambition to serve the role as an international city as well as a “platform of trade and services” for the world as a whole.

Although it is unclear whether BRIC will become a real “G4”, Macau should waste no time to promote the research work on BRIC in the following ways: 1) organizing seminars, workshops, conferences, etc., to follow developments of BRIC activities; 2) hosting a BRIC summit in the future; 3) establishing a research center on BRIC; 4) publishing a newsletter about BRIC; 5) setting up a web page on BRIC issues. [10]

By so doing Macau might act as a “melting pot for the four golden bricks” so that the four emerging economies could learn from each other, dissolve all their differences and become one bigger “golden brick”.

IV. A FINAL WORD OF CAUTION

How should we conduct academic research on BRIC? BRIC is something like a forum of discussing global issues, such as reforming the international financial system, dealing with climate change, pushing forward the Doha Round, etc. Consequently, it is not a wise idea to discuss the internal issues like income distribution, fiscal reform, corruption, environment, poverty, education and so on, though these issues are important.

If these internal questions are to be discussed, why should we limit the discussion only to BRIC? Every developing country has these problems. So it would be much better to discuss them in a wider spectrum. BRIC was born not for these domestic issues, but for global issues.

10 To do the whole list of things, Macau needs to deal with the lack of researchers and scholars on the subject.